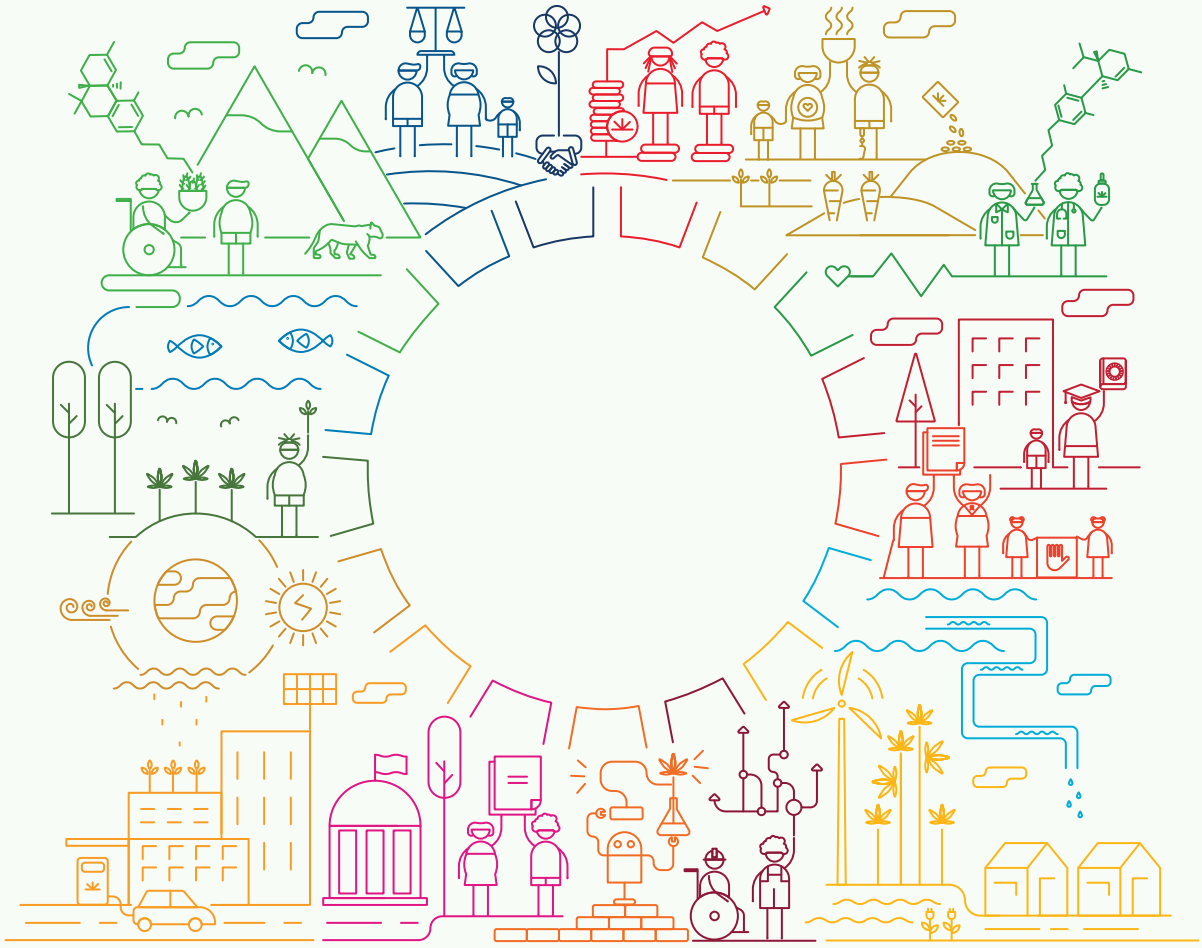

CANNABIS & SUSTAINABLE DEVELOPMENT

Paving the way for the next decade in *Cannabis* and hemp policy

FAAAT EDITIONS

Cannabis & Sustainable Development.

Paving the way for the next decade in *Cannabis* and hemp policies.

Recommendations for the implementation of *Cannabis* policies aligned with international Human Rights standards, the 2030 Agenda for Sustainable Development and the 2016 UNGASS outcome document.

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Forewords.

« *The Sustainable Development Goals offer an invaluable platform to help reshape the public policy agenda. By placing people at the center of our efforts, those of us who occupy decision-making positions must critically analyze the paths taken so far, and be ready to modify actions that have not achieved the expected results.*

Policies that relate to drugs, in particular, have much to learn from the 2030 agenda. If something is to be considered problematic in this domain, it is not fundamentally in relation with the very substances, but rather in relation with shortcomings and limitations in terms of sustainable human development that our societies suffer.

The tragedies caused by the lack of adequate and effective control of drug markets have increased social suffering, especially in relatively less developed countries and regions.

That is the reason why sustainable development opportunities must be taken as a guidance to improve the performance of drug policies. But this will not be possible without a strong public administration and efficient evidence-based public policies that, without repeating schemes worn out by the absence of results, take on the challenge of incorporating a new focus.

For all these reasons, we commend the efforts that Civil Society is undertaking to achieve an effective political incidence of this agenda, and we gladly join in an open dialogue where diverse voices and visions can fit. »

Diego Martín Olivera Couto,
Secretary-General,
National Drug Council,
Office of the Presidency of the Republic,
Oriental Republic of Uruguay.

The authors dedicate this report to Louis Armstrong and Joep Oomen. Each, in their own way, helped create this revolution we are seeing the birth of today in *Cannabis* policy.

Preamble.

Cannabis placement in international law was done in the absence of scientific evaluation and has provided the basis for a morality drivin war on drugs for many decades. Among governments and non-state actors there are relatively few who still deny the failure of drug prohibition, and even less that advocate for its continuation. The World Health Organization backed and justified the severe status of control applied to the plant during the design of modern international drug policy[1] – yet recently invited the world to rethink the approach to *Cannabis* by assessing it for the first time on the basis of evidence, and by recommending that international control over the plant, its components, and its medical preparations be lowered[2].

Cannabis policy reform helps create a model and forge the tools necessary to address the outdated or missing evidence as well as scheduling issues for a wide array of plants, products, or substances liable to generate harms or dependence in humans.

Because of its characteristics, widespread cultivation and use, and the diversity of its applications, the *Cannabis sativa* L. plant and related policies directly pertain to at least 64 of the 169 targets among 15 out of the 17 Goals of the United Nations 2030 Agenda for Sustainable Development[3] (the **Sustainable Development Goals**, or **SDGs**) adopted by a consensus of all Member States of the UN in 2015. This **sustainable address of *Cannabis* and *Cannabis* policy** echoes 75 of the 104 operational recommendations of another document adopted by global consensus one year later, the outcome document of the 30th special session of the UN General Assembly[4] on the world drug situation (**UNGASS 2016**) which noted that "efforts to achieve the Sustainable Development Goals and to effectively address the world drug problem are complementary and mutually reinforcing".

Surprisingly, this plant affects the SDGs both positively and negatively. And policies play a major role in the impact of *Cannabis* on our societies.

The **non psychoactivity-related uses of the *Cannabis sativa* L. plant** – called "**hemp**", "industrial hemp" or "**industrial** cannabis" in this context – have accompanied humankind over centuries, in particular for the provision of food from the seed (Goals 1 & 2) and through the numerous products derived from its fiber, among which, efficient building materials can be locally sourced and produced. (Goals 9 & 11). More recently, the plant has continued to be explored for the soil-cleaning property of its roots, contributing to clean water and oceans (Goal 13). The significant biomass produced by the stems of cannabis has revealed itself to be both a promising source of energy (Goal 7) and a renewable source of recyclable vegetal plastic (Goal 15), etc.

Yet, not only the non psychoactivity-related uses of *Cannabis sativa* L. can contribute to the efforts to meet these Goals (1, 2, 7, 9, 11, 12, 13 and 15); in addition, reforming the current repressive, prohibitive, and marginalizing policies concerning the psychoactivity-related uses of *Cannabis sativa* L. is indispensable to meet Goals 3, 4, 5, 8, 10, 13, 16 and 17.

1 Riboulet-Zemouli et al., 2019.
2 WHO, 2019.
3 UNGA, 2015; See also UN (s.d.): "SDGs Knowledge Platform" at sustainabledevelopment.un.org
4 UNGA, 2016; See also UNODC (s.d.): "UNGASS 2016 Good Practices Portal" at www.postungass2016.org

The psychoactivity-related uses of ***Cannabis sativa*** L. witnessed throughout History – are very diverse and include what is known as "**therapeutic**" or "medical use", "**recreational**" or "adult use" as well as "religious" or "**spiritual** use".

Overly restrictive public policies addressing the psychoactivity-related uses of the plant have hindered its availability for medical purposes and prevented implementation of sensible regulation for non-medical use applications. In many countries, and under the influence of international institutions, these policies eventually took the form of a "War on Drugs" that targeted the cultivation/distribution of the *Cannabis sativa* L. plant (among others), its psychoactivity-related uses, and all related activities, with an objective of eradication.

These policies became warped into a destructive spiral – contemporarily proving to be a major historical failure in several capacities (e.g., policy, environment, economic and human cost, etc.)[5].

This attempt to create a "drug-free world"[6] through prohibition and proactive law enforcement, created a pretext for State violence while generating or reinforcing criminal groups, in particular in regions with historical presence of the *Cannabis sativa* L. plant. Non-democratic, repressive, and authoritarian approaches to supply and demand reduction policies have systematized government corruption (Goal 16), increased arrests and imprisonment rates (Goals 1, 11 and 1)), and augmented factors of social and health risks for people who use cannabis (Goals 1, 3 and 10) by hindering access to appropriate prevention and education for safe consumption (Goals 4 & 12), ultimately generating innumerable human rights violations (Goal 16) in particular among women (Goal 5), minorities (Goal 10), and the poorest (Goal 1).

All the individual and collective conditions targeted by these latter Goals are deeply affected, making it impossible, in practice, to reach the Agenda by 2030 without adopting <u>now</u> radically different regulations of all aspects and activities linked to the psychoactivity-related uses of the *Cannabis* plant.

When the XXIst Century was just around the corner citizens and social movements struggled to balance the pillars of the United Nations – peace, security and development – with ethics, sustainability and planet-sensibility. Many anticipated the degradation of social, geopolitical, diplomatic or environmental contexts that we are nowadays witnessing. But few were those who could have believed that the United Nations would hear their call, make these concepts hers, and proactively promote sustainability. Similarly, decades of vigorous and narrow-minded approach to *Cannabis* by multilateral organizations have made many lose faith in the ability of the United Nations to reconnect with realities of the ground and efficiently assess and address both the good as well as the bad sides of *Cannabis* and *Cannabis* policies. The authors of this document tend to think that the period from 2015-2020 is pivotal (with the SDGs, the UNGASS and the WHO reviews) that will call for intense involvement and cooperation at all levels to transform our world for 2030, and instigate peace, security and development in harmony with the ethnosphere with the help of sound ethical and sustainable *Cannabis* policy reforms.

5 Rolles et al., 2016.
6 UNGA, 1998.

Introduction.

The reformist trends in *Cannabis* policy globally is an ongoing movement unlikely to be stopped. A deficit of democratic monitoring of the generalization of legal *Cannabis* markets could represent a threat for affected populations and public health. Ethics are needed. A renewed interest and takeover of the topic *Cannabis* by all categories of the population are urgent.

A one-size-fits-all policy seems neither desirable nor possible, both for geographical imperatives and for the diversity of uses and products of the plant. This makes consensual policy models (exportable and generalizable) difficult to emerge.

Rather than trying to solve the equation of the perfect *Cannabis* policy and its infinite variables, a more feasible approach would be to step aside, list all the different public policies that affect, or are involved with *Cannabis*, and address them individually. The 2030 Agenda for Sustainable Development and its 17 Goals is but a perfect tool for this purpose.

This discussion paper highlights important research and experiential outcomes from scholars, civil society organizations, affected populations, and market stakeholders. It seeks to show the potential of the *Cannabis* plant in appropriately regulated settings as transformative for our societies – so long as ethical practices and sustainable approaches are kept central.

This document is not intended to be an exhaustive guide. It is designed as a valuable resource to contribute to post-prohibition studies, and help understand, from diverse public policy perspectives, the links between the policies of *Cannabis* and the Sustainable Development Goals, and the impact of the former on the latter.

Definitions.

Addressing such a complex issue requires the recollection of basic concepts and definitions.

Cannabis sativa L. is the botanical name of a plant belonging to the family Cannabaceae. Modern research has shown that the genus *Cannabis* is mono-specific (i.e, within the genus "*Cannabis*", the only existing species is "*sativa*"). According to the United Nations Office on Drugs and Crime (UNODC), while *Cannabis* is commonly designated by different subspecies names (e.g., "indica", "ruderalis", "spontanea", "kafiristanica"), "the chemical and morphological distinctions by which cannabis has been divided into these subspecies are often not readily discernible, appear to be environmentally modifiable, and vary in a continuous fashion. For most purposes, it suffices to apply the name *Cannabis sativa* to all cannabis plants encountered."[7]

Hemp is the English vernacular name historically given to *Cannabis sativa* L.[8]. Nowadays, its meaning has evolved, to mean crops explicitly grown for purposes other than the psychoactive ones, such as clothing fiber, paper, fuel, building material from the fiber, or food and oil from the seeds. **The dissociation of "hemp" from psychoactivity-related *Cannabis* is purely artificial and terminological.** Nevertheless, States have adopted various cutting points to distinguish legal and illegal *Cannabis* according to THC content (e.g., 0.2%, 0.3%, 0.6%, 1%).

The dried parthenocarpic fruits (i.e., fruits not wearing seed) of the female *Cannabis sativa* plant are known by dozens of different names (with significant geographical variations) for being the part of the plant that contain the highest concentration of **phytocannabinoids**, molecules that have innumerable pharmacological effects on animals (including human beings). Phytocannabinoids are only one among diverse classes of organic compounds with pharmacological effects of the plant. They are much more specific to *Cannabis sativa* L. than to any other plant.

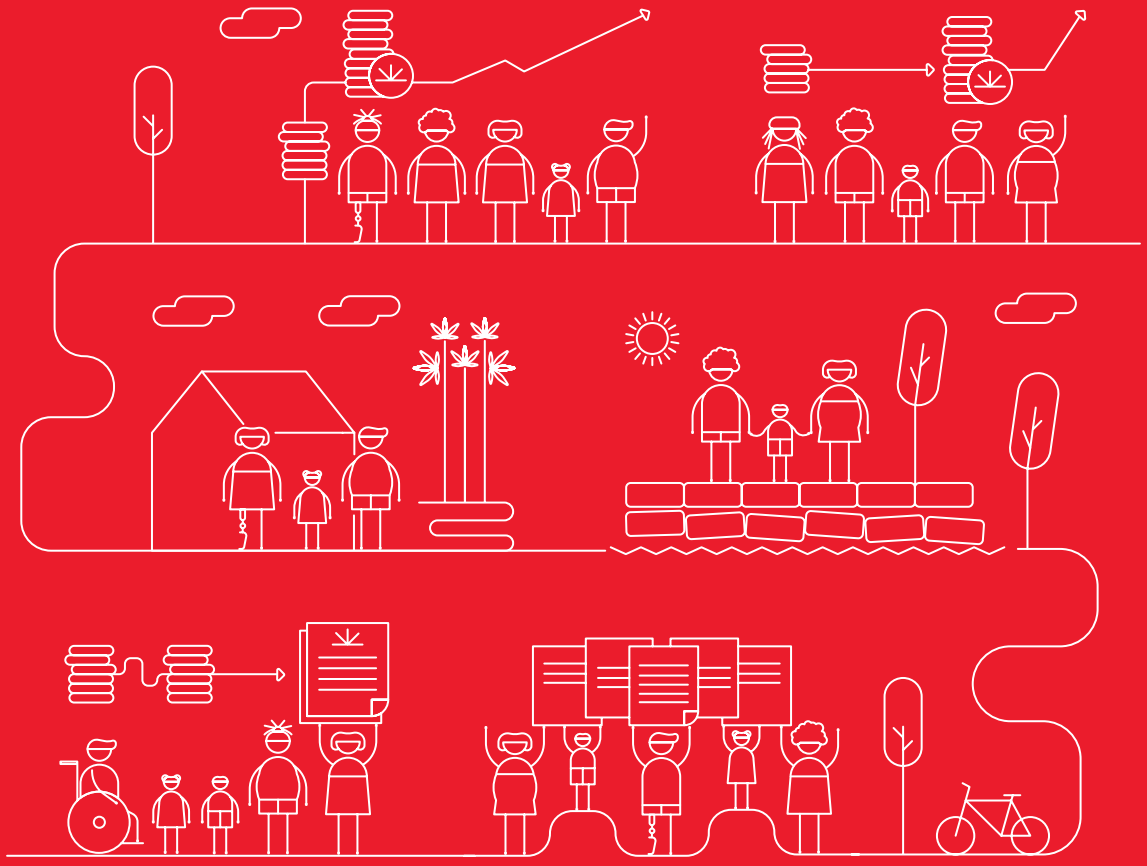
It was only in the late 1990s that research started to reveal the mechanisms of action of these phytocannabinoids, responsible for the unique and characteristic psychoactive effects of the *Cannabis sativa* L. plant. Cannabinoids – not only phytocannabinoids (from ancient Green φυτόν (phutón), "plant"; **phyto-**cannabinoids are cannabinoids present in plants) but also endocannabinoids (from ancient Greek ἔνδον (éndon), "inner", "internal"; **endo-**cannanbinoids are endogenous, internal to human body) activate specific neuronal receptors in the human body[9]; and these receptors form the **endocannabinoid system**, involved in maintaining the body's homeostasis[10]. Chemist have nowadays created artificial molecules that enter in the same chemical family and activate the human endocannabinoid system: they are called **neocannabinoids** (from νέος (néos), "new", "young") and can only obtained by chemical synthesis.

7 UNODC, 2009.
8 Hazekamp et al., 2016
9 Hanuš et al., 2016
10 Komorowski et al., 2007

Δ^9-THC (delta-9-tetrahydrocannabinol) is the cannabinoid identified as being primarily responsible for the unique pharmacological effects of *Cannabis*, including the so-called "high", but also an important part of the medical effects associated with the plant. While being the primary psychoactive constituent present in *Cannabis sativa* plants, its effects are modulated by complex pharmacological interactions with more than 150 other cannabinoids thus far identified. Other well-known cannabinoid, CBD, however, does not provoke the "recreational" effect of Δ^9-THC.

NO POVERTY

End poverty in all its forms everywhere.



GOAL 1: KEY POINTS & RECOMMENDATIONS

The *Cannabis* market is to a large extent dominated by local cultivation and consumption. Yet, *Cannabis* crops grown mostly by small food producers and family farmers are largely curtailed and exploited by Drug Trafficking Organizations.

There are traditional local implantation of these crops in many regions, and all major illicit *Cannabis*-producing areas are in developing countries. Policies should ensure legal international trade benefits the populations that have been growing *Cannabis* for generations.

Legally regulating psychoactivity-related *Cannabis* are a direct way to economically empower populations living in situations of poverty. Policy reform should target vulnerable populations already involved in illicit *Cannabis*-related activities and prioritize their inclusion in regulated markets.

Reasonable redistribution of the profits: The high number of middlemen between growers and consumers is a characteristic element of illicit *Cannabis* markets – policy reforms should reduce their number, or reduce middlemen's profits compared to those of growers and retailers.

Diversification in the type of *Cannabis* products manufactured (health-related products, food, energy, bioplastics, textile, etc.) should be seeked to reduce farmers' vulnerability to market price variations, and contribute to local or self-sufficiency,.

Cannabis and hemp crops regulation programs should be embedded within regional, national, and local agricultural strategies.

Imprisonment often means the removal of a family or community member expected to contribute to the economic stability of the group. Alternatives to prison should be systematized in the case of petty *Cannabis* and drug policy offences.

Criminal records (which stigmatize and undermine the offenders' ability to reintegrate appropriately into society, and collaterally affects labour, family, and education) should be erased.

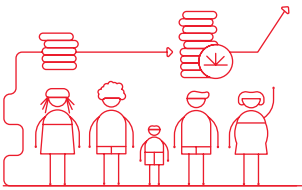
Crop eradication policies should be urgently discontinued, as they destruct farmers' sole means of survival and push them further into poverty. Related practices such as land seizure, crop fumigations and other indiscriminate mass-eradication methods must be stopped. New policies should repair asset forfeiture, seizure of *Cannabis* farmers' land, and set up procedures of property claim and restitution.

Policy reforms should consider legal *Cannabis* production as an outcome of Alternative Development programs and strategies: Instead of replacing *Cannabis* plants with other crops, AD policies could focus on training and assisting farmers in their transition from illegal to legal *Cannabis* production settings.

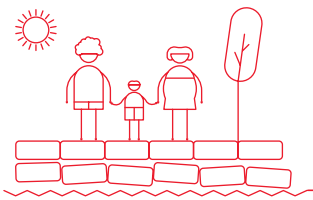
It is crucial to proactively preserve the traditions associated with the long-established cultivation of *Cannabis* while granting fair access to international regulated markets.

Implementation of intellectual property protections such as geographic indicators to preserve, enhance, and valorize traditional knowledge and products, and to ensure fair and non-relocatable economic opportunities for the populations concerned, is desirable.

Target 1.1
By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day.



Target 1.2
By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.



Target 1.5
By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

ACCELERATE CLIMATE ACTION FOR ALL SDGs

Accelerate climate action for all Sustainable Development Goals.

Operational Recommendations from the UNGASS 2016 Outcome Document	
3- supply (b)	5- trends (v)
6- cooperation (d)	7- development (a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l)

A **multifactorial approach** is needed to tackle poverty, and systemic changes are inevitably required. In that regard, national laws legally regulating psychoactivity-related *Cannabis* are a direct but unexplored way to economically empower populations living in situations of poverty, and give everyone a chance to live in dignity.

The UNODC acknowledges that "**the cannabis market** [...] **is to a large extent dominated by local cultivation and consumption**"[11]. This includes, of course, a remarkable number of persons cultivating the plant for their consumption. However, the vast majority of *Cannabis* growers worldwide do cultivate it as an economical and income-generating activity.

Populations in impoverished rural areas of peripheral countries are often the most vulnerable. Among them, many have been involved in the (illicit) production of *Cannabis*, because of **traditional local implantation of these crops**, for lack of employment or a possible alternative legal activity, or by coercion in areas of conflict. There, *Cannabis* crops grown mostly by small food producers and family farmers are largely curtailed and exploited by Drug Trafficking Organizations (DTOs).

Similarly, **in urban areas**, including in developed countries, **people involved in illegal retail markets often belong to minorities, vulnerable groups, and/or the youth**.

Agriculture to reduce poverty.

Tilting the balance of illicit profits in favour of the poorest in the supply chain.

A public **policy reform targeting vulnerable populations already involved in illicit *Cannabis*-related activities**, to prioritize their inclusion in a regulated market, is one way to explore directly impacting and increasing the quality of life for those populations, while providing them with fair economic and employment opportunities, contributing to push the global poverty curve to a tipping point.

In complement, **socially just regulations** focusing on reducing the high number of middlemen between growers and consumers (a characteristic element of illicit *Cannabis* markets) – or on reducing middlemen's profits compared to those of producers – would significantly increase resources for peasants, small-scale and family farmers, as well as for populations involved in the illicit retail markets.

Such a **reasonable redistribution of the profits generated**, to the bottom of the pyramidal structure of *Cannabis* markets hierarchy would significantly reduce poverty. It would also help end situations of labour exploitation of adults, children and young people, thus aligning with Goal 8.

A collateral output could be an increased capacity of farmers to invest in the diversification, mechanization of their farms, leading to increases in product quality, sustainability, and production patterns. Importantly, **diversification in the type of *Cannabis* products manufactured** (health-related products, food, energy, bioplastics, textile, etc.) can reduce farmers' vulnerability to market price variations.

These benefits, however, imply a democratic and transparent monitoring of crops and the technical training of

11 UNODC, 2011.

the populations involved. Only **embedding *Cannabis* crop regulation programs within regional, national, and local agricultural strategies can lead to these benefits**.

Normalizing hemp fields in agricultural strategies worldwide.

Cannabis fields, in particular for non psychoactivity-related outcomes, have been a common site of human civilization over the past centuries[12], and a traditional farm crop of fiber and edible seed, used for self-sufficiency, economic growth and development. Where *Cannabis* cultivation is not traditional, it is also possible to consider introducing annually renewable non psychoactivity-related *Cannabis* production for fiber, paper[13], fuel, and edible seeds. Again, **normalizing hemp crops within national agricultural strategies** is a way to revitalize underdeveloped rural economies, by reducing the need for imported commodities.

A prohibition fuelling poverty

In itself, restrictive and punitive enforcement of *Cannabis* control policies has contributed to – if not created – situations of impoverishment for people engaged in *Cannabis*-related illicit activities. The UNGASS 2016[14] recognized that "criminal justice and socioeconomic-related factors [...] may facilitate, drive, enable and perpetuate organized crime and drug-related crime"[15] and also called to "[intensify] efforts in the context of long-term and sustainable development programmes to address the most pressing drug-related socioeconomic factors, including unemployment and social marginalization, conducive to their subsequent exploitation by criminal organizations involved in drug-related crime."[16] There seem to be a **consensus to put an end to the vicious circle of prohibitive *Cannabis* and drug policies that fuel poverty**, poverty fueling involvement in DTOs, which fuel the reinforcement of harsher prohibitive policies… And the UNGASS 2016 consensus is right in pointing sustainable development programs as an appropriate way to counter that negative trend.

Eliminating criminal justice-related poverty.

An alarming number of prison sentences for offences related to *Cannabis* possession[17], often resulting from geographic-, age-, or ethnic-profiled police controls, always disproportionate in light of the damage caused by the offender to society (personal possession, use, or even petty & non-violent trafficking, do not provoke other harms than the ones to the very offender, and therefore cannot justify prison sentences), point out to possible systematic violations of human rights (in particular the right to privacy, the right not to be subject to cruel, inhuman or degrading treatment, etc.) and individual freedoms. It affects to a greater extent specific groups (e.g., women, young people, migrants, native communities, LGBTIQ, people who use other drugs than *Cannabis*, etc.)[18].

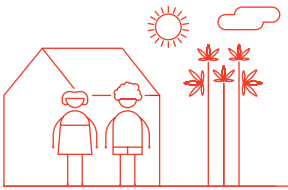
12 Smith-Heisters, 2008.
13 Dewey and Merrill, 1916.
14 UNGA, 2016.
15 ibid., see 3 (b)
16 ibid., see 5 (v)
17 GCDP, 2014.
18 See Goals 10 and 16.

The **lack of alternatives to imprisonment, in particular of young people, often means the removal of a family or community member expected to contribute to the economic stability of the group**.

Even without going to jail, the consequences of a single arrest for *Cannabis*-related offenses may prevent affected persons from acquiring skills that could have contributed to improving their standard of living. In particular, having a **criminal record – a standard output of police controls – can stigmatize and undermine the offenders' ability to reintegrate appropriately into society**. It also collaterally affects labour, family, and education. According to the United Nations Development Programme (UNDP), "discrimination, a lack of investment in health and social welfare, and laws criminalizing the use or possession of small amounts of drugs for personal use impede access to basic services such as housing, education or health care including treatment"[19] – fuelling poverty.

Ending such a vicious circle induced by prohibitionist policies could contribute to **reducing an important number of factors contributing to poverty**.

Target 1.4
By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.



Target 5.a
Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

Operational Recommendations from the UNGASS 2016 Outcome Document	
3- supply (b)	4- rights (d) (g)
6- cooperation (d)	7- development (a) (b) (d) (j) (h)

19 UNDP, 2015.

Similarly to other controlled plants (e.g., poppy, coca), *Cannabis* is often produced in "isolated areas of the world, where the state's presence tends to be limited to law enforcement interventions to destroy illegal crops and arrest farmers engaged in their cultivation. Many of these areas are also plagued by high levels of inequality and unequal access to land tenure. **The destruction of farmers' sole means of survival does little more than push them further into poverty**."[20] Women often have an important role in these communities – and suffer a disproportionate impact of law enforcement.

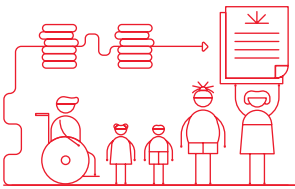
During the last decades, the lack of favourable public policies – limited only to repressive law enforcement, sustained counter-narcotic approaches, and crop-eradication – have caused the rights to the enjoyment of ownership and economic resources to be stripped away from vulnerable populations involved in *Cannabis* cultivation or production.

Among others, some major elements hampering the fulfillment of target 1.4 are:

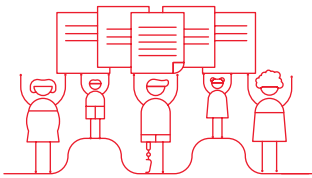
- Seizures of farmers' properties as a result of "supply reduction" operations and policies, which annihilate ownership and control over land. Family farmers' property titles, which have sometimes taken generations to secure are forfeit in one day;
- In some countries, discriminatory laws prevent those who have criminal records related to *Cannabis* policy infringement from purchasing properties;
- Ground and aerial crop fumigations and other indiscriminate mass-eradication methods severely diminish natural resources and disrupt ecosystems. Future capacity of soils to produce viable crops, of any kind, is undermined (see more in 2.4), thus depriving populations of a central source of income: agriculture;
- Control of *Cannabis* market by DTOs deepens the infrastructure and technology breaches in areas under these organizations' control.

Meeting targets 1.4 and 5.A means **reforming policies that include asset forfeiture, seizure of *Cannabis* farmers' land, and to set up procedures of property claim and land restitution**.

20 GCDP, 2018.



Target 1.a
Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.



Target 1.b
Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions.

Operational Recommendations from the UNGASS 2016 Outcome Document	
3- supply (b) (d)	4- rights (i)
6- cooperation (a) (d) (e)	7- development (b) (h) (i) (j) (k) (l)

Mobilizing resources.

According to the list established by the US administration[21], **all major illicit *Cannabis*-producing countries are developing countries**. Historians have pointed out that this state of fact might be related to the concomitance of decolonisation with the definition of the international drug control system[22].

As such, there is particular potential for a legally regulated *Cannabis* industry to contribute to economic growth worldwide. In developing countries, such a market can significantly change the game, helping people find employment or starting businesses and incentivized trade across borders that will increase the economic mobility of global citizens.

21 CIA, 2018.
22 Bewley-Taylor et al., 2014

Cooperating for development.

Future legally regulated *Cannabis* markets should **ensure that international trade benefits the populations that have been growing it for generations** and territories for which this crop has historically constituted part of the income.

Recent developments in the Global South (such as Lesotho[23], Thailand[24], Colombia[25], three countries with a tradition of psychoactivity-related *Cannabis* cultivation) show that countries are ready to allow the development of a locally regulated cultivation of Cannabis for medical purposes. Too often these reforms only cover the production for purposes of export to reformed jurisdictions or countries where medical use of *Cannabis* and *Cannabis*-based medicines is allowed, while **reforms should focus on local and regional demands**.

Special care should be taken when undertaking such reforms: Only granting licenses to foreign-owned corporations risks undermining local development by hampering the integration into legal markets of the growers that were already producing *Cannabis* for the illicit market.

Furthermore, the granting of licenses for the production of psychoactivity-related *Cannabis* for medical purposes should always go accompanied with the set up of the whole system provided for in the International Drug Control Conventions: a national agency, and licenses for the manufacture, dispensation, prescription (when relevant), and use within the borders of the country.

A **careful approach to legal regulations** should be adopted, taking stock of the newly recognized Rights of Peasants and people working in rural areas[26], and using existing instruments of international cooperation, such as Alternative Development.

Rethinking Alternative Development in the context of regulated markets.

International cooperation in the field of **development and poverty-reduction among *Cannabis*-producing cultivating communities have always been focused on, and conditioned by, goals of crop-eradication and crop-replacement**. These programs, called "Alternative Development" (AD), are described as a way to "encourage producers of drug crops to shift to remunerative alternative crops such as cacao or coffee. When properly implemented, alternative development can help farmers involved in illicit crops make the transition to livelihoods not related to drugs"[27].

Unfortunately, the concept and **practices implied by AD have shown their limited efficiency**, often lacking clear strategies built and agreed with the farmers, minimal program funding, and ultimately met little acceptance because of the close association of AD programs and military eradication procedures[28]. These barriers are starting to be overcome in some countries where **humane and horizontal approaches to AD**

23 Tharoor, 2018.
24 Kaweewit, 2018.
25 Congreso de la República de Colombia, 2016; Ministerio de Salud y Protección Social de Colombia, 2017.
26 HRC, 2018.
27 OAS, 2013.
28 Alimi, 2018.

programs have managed to reduce the cultivation of opium poppy. A major element that seems to make Alternative Development programs structurally non-viable on a large scale: sustained demand continuously drives the development of production, and the so-called "balloon effect"[29], the observation that pushing down cultivation in one region causes it to bulge somewhere else[30].

In light of the recent developments in international trade in *Cannabis* plant derivatives, contemporary policies could consider legal *Cannabis* production as an outcome of AD programs and strategies: **Instead of replacing *Cannabis* plants with other crops, Alternative Development could focus on training and assisting farmers in their transition to legal settings.** It is both feasible and desirable to help a sustainable transition of populations involved in illicit trafficking by helping farmers to adapt soils, buy new seeds, or learn improved and sustainable practices.

Comparatively, such a review of AD programs would provoke less opposition by populations, highlight and add value to their traditional knowledge and empower them. Fewer resources would be needed, allowing reallocation of part of the resources to interrelated needs (e.g., infrastructures, education, and the presence of public services).

This approach **could prevent farmers historically involved in *Cannabis* cultivation from being excluded from legally regulated international markets**. In that direction, Turkey undertook opium policy reforms that could inspire: Its licensing system has maintained the 70000 to 100000 small-scale opium poppy farmers (cultivating an average 0.4 hectares per person)[31] whose production (of morphine, among others) is legally sold and used in healthcare settings worldwide, instead of fuelling illicit trade in opioids.

Protecting traditional Cannabis-related knowledge and know-hows.

On these issues, sound policy frameworks and pro-poor development strategies cannot be deployed without proper protection of traditional *Cannabis* farmers from the threats that global markets can represent in the context of a rapid post-prohibition transition. **It is crucial to proactively preserve the traditions associated with the long-established cultivation of *Cannabis* while granting fair access to international regulated markets.** Countries such as Afghanistan, Colombia, Ethiopia, Greece, India, Jamaica, Kenya, Lebanon, Lesotho, Mexico, Morocco, Nepal, South Africa, Thailand, Turkey and others are areas where *Cannabis* has an extensive historical presence. Not only do **endemic plant cultivars/chemovars (often called "landrace strains") distinguish these regions, but specific cultivation, processing, extraction, or manufacturing practices are also constituents of these traditional knowledge and cultural expressions**.

Public policies should consider tools, such as protected **geographic indicators to preserve, enhance, and valorize traditional knowledge and products, and to ensure fair and non-relocatable economic opportunities** for the populations concerned.

29 UNODC, 2008.
30 The Economist, 2013.
31 Rolles, 2016.

ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

GOAL 2: KEY POINTS & RECOMMENDATIONS

Centuries of history showed it, and contemporary research demonstrated it: *Cannabis* seeds are a functional valuable and healthy food resource. Besides traditional ways of eating *Cannabis* seeds products, high nutritional value should lead to seed-derived products being considered as important agents in the fight against malnutrition.

Non-psychoactivity related *Cannabis* crops are a perfect candidate to contribute to increased value-added and productivity in agricultural production. For instance, substituting cotton with non psychoactivity-related *Cannabis* crops can increase productivity while drastically reducing water consumption for irrigation.

Local "hemp seed" production for seeds can help securing continued, cheap, equilibrated and essential food supply in impoverished areas.

The high biomass production of *Cannabis* has multiple advantages for to increasing efficiency and income, while reducing costs for farmers (carbon sequestration, weed control, but also recycling of waste and overproduction). Excess of plant biomass can be turned into biochar to fertilize soils, bioplastic materials or biofuel.

Increases focus should be placed on studying the promising mechanisms of the *Cannabis* plant for phytoremediation and cleaning of soils contaminated with hazardous elements.

Countries should firmly implement non psychoactivity-related *Cannabis* policies relying on the total exemption from international drug control measures of the 1961 Single Convention.

Genetic resources and associated traditional knowledge on the *Cannabis* plant are invaluable assets determining the global food security, especially in the context of threats to biodiversity, climate change and the expanding global population. The rich international protections for traditional medicine, knowledge and cultural expressions must urgently apply to legacy *Cannabis* growers communities.

Community-led initiatives to support and preserve genetic diversity, as well as knowledge and know-how regarding the *Cannabis* plant should be publicly supported.

Stakeholder-driven approach to preserve genetic resources and enhance communities' accession to legally regulated markets (such as Appellations of Origin) should be supported and promoted, in particular in peripheral and developing countries.

Laws restricting non psychoactivity-related *Cannabis* cultivation to a list of selected registered "varieties" cause concern over the preservation of, and communities' rights over, genetic resources, practices, and knowledge associated with traditional (unregistered) cultivars/chemovars. It is also a barrier to innovation, research, and development of genetics of interest. Hemp crops should be differentiated from psychoactivity-related crops using the ratio methodology proposed by UNODC.

Target 2.1
By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

Target 2.2
By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

Operational Recommendations from the UNGASS 2016 Outcome Document

3- supply (b)	6- cooperation (d)

The **seeds of *Cannabis sativa* L. have been used as nutrition for thousands of years**[32] on all continents[33]. Although the *Cannabis* seed has lost its place in our meals over the course of the XXth Century due to the overall reduction of *Cannabis* cultivation for all purposes on the coattails of prohibitionist policies, a come-back of "hemp seed" in various forms of food products and supplements has taken place. Research has identified so-called "hemp seed oil" as a **functional food**, while animal studies demonstrate the long-standing utility of **the *Cannabis* seed as a valuable and healthy**[34] **food resource**.

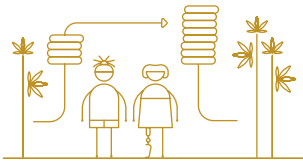
Cannabis seeds are generally composed of about 30% oil and 25% protein, with considerable amounts of dietary fiber, vitamins, and minerals. The "hemp seed oil" obtained by mechanical extraction, contains over 80% polyunsaturated fatty acids, being exceptionally rich linoleic acid (omega-6) and alpha-linolenic acid (omega-3) with an omega-6 to omega-3 ratio considered optimal for human health[35]. The biological metabolites of the two essential fatty acids, gamma-linolenic acid and stearidonic acid are also present[36].

Besides the traditional ways of consumption (seeds used raw or roasted, pressed as oils or ground as flour; flowers used raw or in milk, teas, etc.), the high nutritional value of *Cannabis* seeds allow for fast **mass scale distribution of "hemp seed"-derived products to fight malnutrition**[37].

32 Schluttenhofer and Yuan, 2017.
33 See the example of South Africa: Coogan, 2016.
34 See also Target 3.4, section on "hemp and NCDs".
35 INFMP, 2017.
36 Callaway, 2004.
37 New Indian Express, 2018.

While value-added and productivity in general agriculture are relatively low compared to other sectors, incorporating "hemp" could increase productivity in that segment. For instance, the *Cannabis* plant produces twice as much fiber per acre as cotton and does not require irrigation. **Substituting cotton with non psychoactivity-related *Cannabis* crops would help increase productivity while drastically reducing water consumption for irrigation**. The cultivation of *Cannabis* for non psychoactivity-related purposes is already economically advantageous in a short-term perspective, allowing for non psychoactivity-related *Cannabis* crops to be a **tool for programs of agricultural transition**.

In peripheral and developing countries, a monitored transition to legal settings (as set out under Goal 1) would allow illegal *Cannabis* growers to **diversify their production** and to **locally supply *Cannabis* seeds-based products**, thus securing an essential food supply in impoverished areas.



Target 2.3
By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

Target 2.4
By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

Accelerate climate action for all Sustainable Development Goals.

Operational Recommendations from the UNGASS 2016 Outcome Document	
3- supply 3 (b) (d)	4- rights (i)
6- cooperation (d)	7- development (b) (h) (i) (j) (k) (l)

Taking advantage of the multiple uses of the plant.

The multiplicity of uses of the *Cannabis* plant allows, besides a diversification of finished products, to **rationalize plant wastes and overstock**, in particular, to implement sustainable crop management practices that increase vegetation production, reduce costs, build and maintain the quality of soils, and avoid the use of agrochemicals.

The **high biomass production of the *Cannabis* plant** sequesters carbon, helps control weeds, and added back into the soil can help build and improve the soil. Waste and overproduction can be turned into bedding and fodder for farm animals, helping to increase efficiency and income, while reducing costs for the farmer. Excess of plant biomass can be turned into biochar using a kiln and added back into the soil improving nutrient and water retention while giving more surface area for microbial growth[38].

Protecting the ecosystem with the *Cannabis* plant & policy reforms.

Chemical eradication programs launched in the name of reducing the supply of *Cannabis* plants have left farmable land arid and poisonous. Putting an end to such practices is the first step to recovery of agricultural productivity of all types of crops. Increased research also tends to show the benefits of the *Cannabis* plant for phytoremediation (i.e., cleaning up of soils, air, or water contaminated with hazardous contaminants)[39].

Target 2.5
By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.

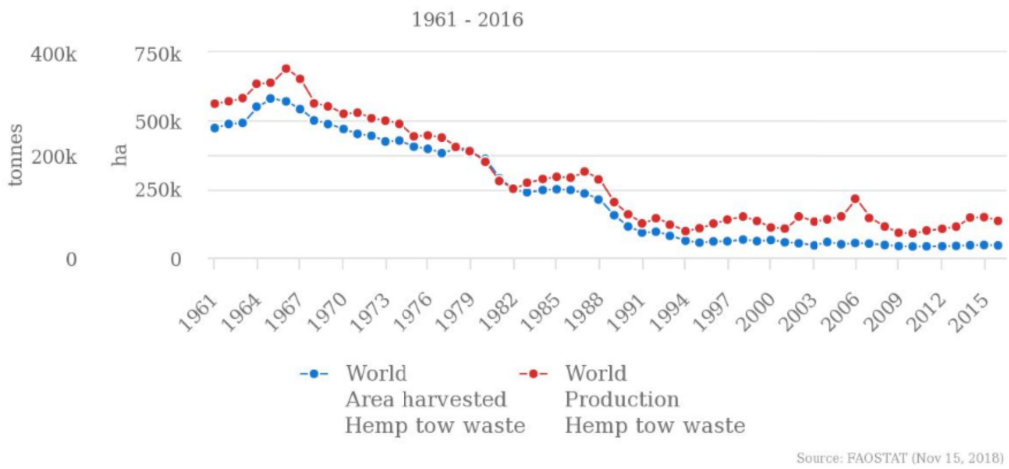
Target 15.6
Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed.

Operational Recommendations from the UNGASS 2016 Outcome Document

4- rights (i)	6- cooperation (d)

38 Amaducci et al., 2017.
39 More details and references under Target 15.3

Encouraging the global discontinuation of the cultivation of a plant with such ethnobotanical importance is by far the least possible sustainable decision to take. Yet it has been an underlying goal of international drug control, in particular since the late 1980s, when the word "eradication" appeared in international fora, resolutions, and Treaties[40]. Although the international drug system theoretically exempts all *Cannabis* plants grown for non psychoactivity-related purposes, the difficult implementation of such policies (due to the lack of botanical distinction between "hemp" and *Cannabis* for psychoactivity-related purposes) has lead to a dramatic decrease in the world production of "hemp", since the adoption of the 1961 Convention on narcotic drugs (see graph below[41]). This context has also dramatically impacted the biodiversity of *Cannabis*[42]. **Countries should firmly implement "hemp" policies relying on the total exemption from international drug control measures** planned in the 1961 Single Convention on Narcotic Drugs[43].



Supporting community-based seed banks and initiatives to safeguard genetics.

According to Javaid Akhter Bhat from Sher-e-Kashmir University of Agricultural Sciences and Technology, "Plant genetic resource and associated traditional knowledge are the invaluable assets determining the global food security especially with expanding global population and climate change. They provide important genes/alleles governing resistance to biotic and abiotic stress that are usually available in wild species and landraces. A number of activities such as increasing population growth, urbanization, clearing of land, overgrazing, the cutting and smoldering of forests, indiscriminate use of fertilizers and pesticides, loss of habitat, climate change, war, and civil strife have impacted negatively that destroyed natural habitats and

40 "Each Party shall take appropriate measures to prevent illicit cultivation of and to eradicate plants containing narcotic or psychotropic substances, such as opium poppy, coca bush and cannabis plants, cultivated illicitly in its territory." (UNODC, 2013. 1988 Convention, Article 14(2)).
41 FAO, 2018.
42 Clarke and Merlin, 2013.
43 UNODC, 2013. See Article 28.

threatened the genetic diversity of crop species as well as associated traditional knowledge. The plant genetic diversity has become highly vulnerable to "genetic erosion," and traditional knowledge too faces serious levels of erosion. In addition, the plant genetic resources and associated traditional knowledge are subjected to misuse and misappropriation known as "biopiracy." Therefore, to address these complex issues of plant genetic resources and traditional knowledge, a number of international instruments/policies have been developed over the years in the form of treaties, conventions, agreements, etc., to promote conservation and access of plant genetic resources and traditional knowledge. These policies also promote benefit sharing arising out of the utilization of these resources as well as prevent the misuse of plant genetic resources and traditional knowledge through intellectual property protection."

This evidently includes *Cannabis*, in the case of which the above-mentioned threats are aggravated by decades of prohibition. The new international policy context favourable to the protection of genetic resources, the rights of peasants[44], the rights of indigenous people, traditional knowledge (TK), traditional medicine (T&CM), and traditional cultural expressions needs to apply urgently to traditional *Cannabis* growers and their communities.

Facing both anthropogenic and policy threats, farmers and *Cannabis* growers have organized globally in reaction to, in particular, the attempts of "eradication". They increased knowledge and know-how regarding the botany and genetics of the *Cannabis* plant, and even created seed banks, contributing to the preservation and research on the plant's genetic diversity.

In the State of California, at a critical moment in the development of its *Cannabis* policy regulations, farmers and policymakers are working to secure a statutory program which safeguards communities' genetic diversity and traditional knowledge with rigorous intellectual property protections. Such a stakeholder-driven approach to genetic resources could lead to the development of labels such as Appellations of Origin (AO)[45] and set a precedent that could have significant repercussions throughout the world, including those in peripheral and developing countries.

Appellation of Origin applied to legacy *Cannabis*-producing regions fulfills the need to match *Cannabis* with the new framework of international legal instruments on genetic resources, the rights of peasants, traditional medicine, TK and cultural expressions – while expanding public access to associated production supply, including pharmaceutical preparations with verifiable production and product quality standards.

Other initiatives from civil society and the private sector have emerged, such as an archival record of existing *Cannabis* cultivars/chemovars[46], with the double aim to fill in gaps of the historic record and to preserve the genetic integrity of these cultivars/chemovars beyond the current trend of patenting *Cannabis* genetics *en masse*. Such initiatives should be supported internationally, even by countries that are still under prohibitive laws, in order to avoid excluding themselves from the benefits yielded by the development of *Cannabis*-related patent in the future.

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44 Human Rights Council, 2018.

45 The World Intellectual Property Organization (WIPO) defines Appellations of Origin as "the geographical denomination of a country, region, or locality, which serves to designate a product originating therein, the quality or characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors." in WIPO, s.d.

46 See: Open Cannabis Project at opencannabisproject.org

Ending registers of chemovars and restrictions over cultivation of *Cannabis* for food purposes.

To differentiate the psychoactivity-related from non psychoactivity-related *Cannabis* crops, decision-makers have generally chosen between three options: extending the prohibition to all types, limiting the maximum allowed percentage of Δ^9-THC in the plant's products, or restricting "hemp" cultivation to a list of selected cultivars/chemovars. This latter method of allowing only registered strains to be cultivated, implemented in China, Canada, or the European Union[47], is an issue causing concern over the preservation of, and communities' rights over, genetic resources, practices, and knowledge associated with unregistered plant chemovars. It is also a barrier to innovation, research, and development of genetics of interest.

Likewise, is is important to note that there is no scientific evidence whatsoever showing that chemovars low in Δ^9-THC produce better quality nor quantity of seed or fiber than the higher Δ^9-THC plant chemovars. **Hemp crops should be differentiated from psychoactivity-related crops using the ratio methodology proposed by the UNODC**, which describes a "simple way of distinguishing between drug-type and fibre-type cannabis is by using the ratio of the main cannabinoids, THC, CBN and CBD"[48]:

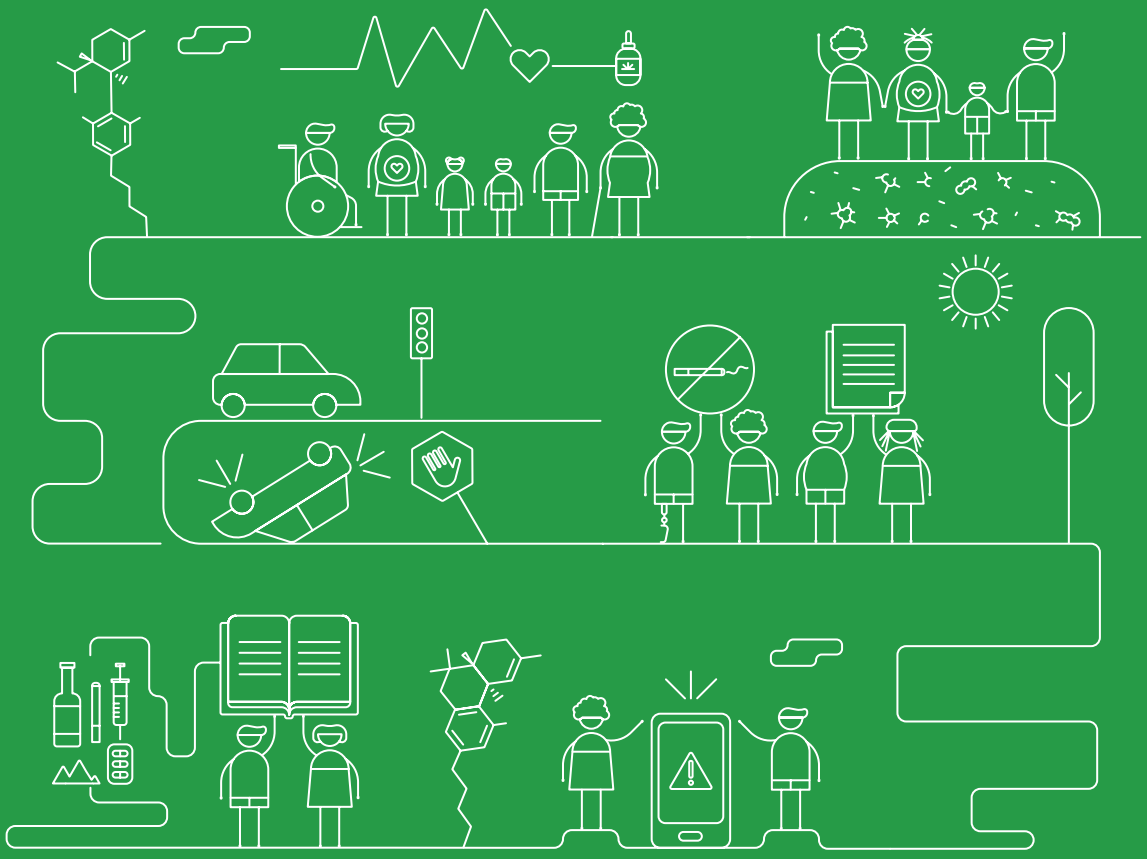
$$X = \frac{[THC]+[CBN]}{[CBD]}$$

$[THC]$ Area of THC in the chromatogram
$X > 1$ Drug-type cannabis
$X < 1$ Fibre-type cannabis

47 European Commission, 2019.
48 UNODC, 2009 p. 20, section 3.15 "Drug-type versus fibre-type cannabis." See also: De Meijer et al., 1992.

HEALTH AND WELL-BEING

Ensure healthy lives and promote well-being for all at all ages.



GOAL 3: KEY POINTS & RECOMMENDATIONS

Herbal *Cannabis* and compounded phytocannabinoid pharmaceuticals contribute to the diversity and thoroughness of contemporary medical practitioners' toolkits, in particular facing non-communicable diseases. It is vital to foster independent publicly-funded research.

Promising therapeutic potential has been pointed out, to combat nausea, vomiting, anorexia, cachexia, spasticity, Tourette's syndrome and other movement disorders, inflammatory bowel disease and irritable bowel syndrome, pain, pruritus, glaucoma, some sorts of epilepsy, asthma, sleep disorders, opioid dependency and withdrawal, some psychiatric symptoms, hyperactivity, ADHD, Alzheimer's disease, autoimmune diseases, inflammation and allergies. Healthcare systems should provide immediate compassionate access to patients in these medical conditions, and undertake proper policy regulations to provide safe and legal medical access to a variety of formulations of *Cannabis* and cannabinoids.

Although *Cannabis* use can eventually generate health hazards, overall use disorders rate are relatively low, and serious adverse events are rare. Prevention and education to safe, empowered and sensible consumption patterns and methods are the only tools known for reducing adverse effects and potential harms.

Herbal *Cannabis* should be further explored tools for nicotine cessation strategies, in particular low-THC herbal *Cannabis*, in countries where "joints" commonly include tobacco.

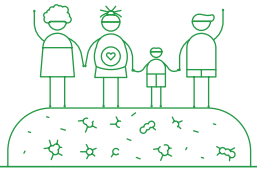
Because prescription herbal *Cannabis* and cannabinoids are always associated with a decrease in the prescription of opioid painkillers, and because the degree of access to *Cannabis* and cannabinoids for medical purposes positively correlates with a reduction in overall prevalence of opioid use disorders, healthcare systems should consider *Cannabis* as a therapeutic adjunct or complement to opioid prescription treatments – in particular in the context of the "synthetic opioids crisis" – as well as in illicit opioid use substitution therapies.

There is also preliminary evidence supporting beneficial effect of *Cannabis* in benzodiazepine use reduction or alcohol use disorder withdrawal, while it has been shown that high prevalence of *Cannabis* use is statistically associated with low rates of premature deaths. These element should be considered in the design of public health strategies on non-communicable diseases.

Food and food-products made from *Cannabis* seeds are rich in protein, essential amino acids, glutamic acid, and supply the exact ratio of essential fatty acids omega-6 and omega-3 the human body requires. They should be considered, for instance, to replace animal-proteins.

There are real risks related to the presence of impurities and adulterants in herbal *Cannabis*, resin, extracts or other products manufactured in illegal settings. There is urgent need for increased pharmacovigilance, normalization of *Cannabis* product production and testing options (for consumers), efficient share and use of collected data by local health and social workers, and training in harm reduction interventions are necessary.

Driving motor vehicles on the basis of simple presence of cannabinoids should cease to be criminalized. Bioassays must be abandoned, and police forces trained to carry out psychometric tests; administrative sanctions could apply only in the cases of actual impaired driving, on the basis of psychometric tests.



Target 3.3
By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

Operational Recommendations from the UNGASS 2016 Outcome Document		
1- demand (i) (o)	2- availability (a) (b) (d) (e)	6- cooperation (d)

***Cannabis* and its derivatives as pharmaceutical products**, and cannabinoids as components of medical preparations, have shown to be essential elements that **contribute to the diversity and thoroughness of modern medical practitioners' toolkits**.

The current status of scheduling and international control over *Cannabis* products (expected to change soon[49]) has discouraged, if not directly impeded, scientific research on the medical potential of *Cannabis* and phytocannabinoids – particularly because publicly funded research has focused primarily only on its "abuse potential".

Cannabis medicines for people living with HIV/AIDS.

There exists a **great body of observational studies, reports and experiences** showing the benefit of cannabis for those living with AIDS, and **clinical studies** have started to appear, quickly evidencing some therapeutic applications of phytocannabinoids. Since 1985, dronabinol (an alternative name for Δ^9-THC, a naturally occurring cannabinoid in the plant[50]) has received approval for the treatment of anorexia associated with weight loss in patients with AIDS and nausea and vomiting associated with cancer chemotherapy in patients who have failed to respond adequately to conventional antiemetic treatments[51]. It has been one of the first recognized medical applications of a *Cannabis* derivative since the World Health Organization (WHO) declared in 1954 that "there should be an extension of efforts towards the abolition of cannabis from all legitimate medical practice"[52].

Beyond nausea, vomiting and anorexia, other research, contemplated by the WHO in their scientific assessment of *Cannabis*, covers pathologies and symptoms, such as: cachexia, spasticity, Tourette's syndrome and other movement disorders, inflammatory bowel disease and irritable bowel syndrome, pain, pruritus, glaucoma, epilepsy, asthma, sleeping disorders, dependency and withdrawal, psychiatric symptoms,

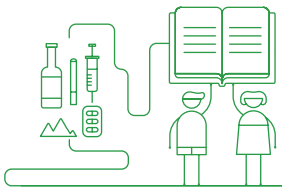
49 Riboulet-Zemouli, 2019.
50 Ibid., for the clarifications about naturally occurring "dronabinol".
51 Insys Therapeutics, 1985.
52 Riboulet-Zemouli et al., 2018.

hyperactivity, ADHD, Alzheimer's disease, autoimmune diseases, inflammation to name the most documented ones[53]. The European Union drugs agency recognized in December 2018 that, although evidence was missing, the potential benefits of *Cannabis*-based and cannabinoid medicines were relevant for "Nausea and vomiting associated with cancer chemotherapy", as an "Appetite stimulant in patients with AIDS-related wasting", for "Muscle spasm in patients with multiple sclerosis", "CNCP, including neuropathic pain", "Palliative care for cancer", "Intractable childhood epilepsy", and "other medical uses, such as sleep disorders, anxiety disorders, depression, degenerative neurological disorders, and inflammatory bowel disease"[54], and recently, the WHO declared that a "number of countries have explored potential therapeutic applications of cannabis-derived products or cannabis-based medicines. This interest has resulted in a rapid rise in quality scientific work on the medical use of cannabis-derived products, and there is evidence that these products can have effective therapeutic applications."[55]

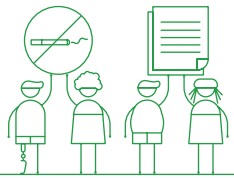
Given this growing evidence, **it is vital to foster independent research by promoting public investment.** But in the meantime, healthcare systems should provide immediate compassionate access to patients in these medical conditions, and undertake proper policy regulations to provide safe and legal medical access to a variety of formulations of *Cannabis* and cannabinoids.

53 National Academies of Sciences Engineering Medicine, 2017.
54 EMCDDA, 2018(2).
55 WHO, 2018.

Target 3.4
By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.



Target 3.5
Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.



Target 3.a
Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.

Operational Recommendations from the UNGASS 2016 Outcome Document

1- demand	2- availability	6- cooperation
(i) (o)	(a) (d) (e)	(d)

Besides the positive applications of *Cannabis* and *Cannabis*-based medicines for the treatment of non-communicable diseases (NCDs) and in the relief of NCDs' symptoms, achieving targets 3.4 and 3.5 also intends to address and reduce *Cannabis* products-use disorders and use-related harms.

Management of *Cannabis* use disorders for health.

The United Nations Office on Drugs and Crime (UNODC) counted between 165 and 234 million people using psychoactivity-related *Cannabis* products worldwide[56].

Use disorders are estimated to affect 9% of adult people who use herbal *Cannabis* during their lifetime[57]. Although data is difficult to aggregate, it is interesting to compare these numbers to those referring to lifetime

56 UNODC, 2018(1).
57 Hall and Pacula, 2010; Anthony, 2006.

users of tobacco (32% for nicotine), heroin (23%, cocaine (17%) and alcohol (15%)[58]. Positive public health outcomes have been achieved in terms of prevalence of use and use disorders related to tobacco and alcohol, but only thanks to public health evidence-based approaches (mainly prevention, quality controls, and non-stigmatizing healthcare systems).

Regular adult *Cannabis* use has moderate outputs on individual health. These are subtle, and extremely rarely, fatal. According to the European Monitoring Center on Drugs and Drug Addiction (EMCDDA) the "short-term health risks associated with the medical use of cannabis and cannabinoids, as reported in trials, were similar to those of other commonly used medicines and related to symptoms such as dizziness, dry mouth, disorientation, nausea, euphoria, confusion and somnolence. Serious adverse events were rare."[59]

Tackling *Cannabis* use disorders and adverse effects is possible and is a key element to contribute to better mental health and well-being for all. And so far, prevention and education to safe, empowered and sensible consumption patterns and methods are the only tools known for reducing adverse effects and potential harms[60].

In the last 30 years, harm reduction has positioned itself as an efficient method to tackle chronic drug-related use disorders[61]. Driven by the HIV/AIDS epidemic, physicians and peer user groups have developed strategies aimed at minimizing the consequent adverse, individual, public health, and social consequences of drug use disorders. Harm reduction covers appropriate therapy programmes, thoughtful consumption devices and equipment, analysis of the products composition, potency, and contaminants, and other similar interventions that prioritize health determinants and well-being over substance use withdrawal. A complete spectrum of harm reduction practices, tools, and commodities are nowadays mainstream in healthcare systems, although insufficient. Yet, *Cannabis*-related use has also been a focus of harm-reductionists, and strategies to tackle *Cannabis* product-related abuse and dependence exist.[62]

Most developments of harm reduction practices has happened at the community-level, while national policies and strategies were focusing on "drug supply reduction" over individual and public health approaches. Health-oriented programs and strategies were mostly taking the form of coercive or compulsory treatment, aimed at reaching abstinence. These State-led approaches have shown their inefficiency at preventing the use, addressing use disorders, and in reducing harms of substances.

Today's *lege artis* good practices clearly orient health action on drugs and *Cannabis* towards education, prevention, and harm reduction, in particular through information on composition, the presence of contaminants, and titration (e.g., product analysis), but also with education and assistance to safe routes of administration routes (e.g., vaporization). Public policies should take stock of the achievements of locally-designed and implemented harm reduction programs, and increase funding and technical support for health and social care professionals.

58 Anthony et al., 1994.
59 EMCDDA, 2018(2). See "summary", page 16.
60 See Goal 4.
61 Harm Reduction International, s.d.
62 Canadian Students for Sensible Drug Policy, 2018; International

Cannabis to tackle NCD-related premature deaths.

Epidemiological research suggests that **the use of *Cannabis* psychoactive products may decrease premature deaths**. The prevalence of *Cannabis* use is indeed statistically associated with reduced rates of obesity, diabetes mellitus, mortality from traumatic brain injury, driving fatalities, use of alcohol, use of prescription medicines, and opioid overdose-related deaths[63]. Although these are not conclusive studies, modern research indicates pathways for *Cannabis* and cannabinoid medicines to contribute to the prevention of non-communicable diseases-related deaths.

Medical research has increased interest in evaluating the **potential of *Cannabis*-based medicines for widespread NCDs, such as asthma and respiratory diseases, alcohol use disorder withdrawal, or the reduction in benzodiazepine use**[64]. The study of CB1 and CB2 receptors[65] in the human body's immune system cells is starting to show the way endocannabinoids function as immunomodulators. This knowledge provides an opening for cannabinoids as promisingly useful therapeutic agents[66] to combat oxidative-associated diseases, cerebrovascular accidents, such as thromboembolic or hemorrhagic stroke, autoimmune diseases (Crohn's disease, rheumatoid arthritis, diabetes), free radical diseases, inflammatory diseases, lupus, cataract formation, gastric ulcers, and neoplasia among others.

Harm reduction approaches have also been shown to reduce risk factors for a number of NCDs. Recent studies have focused on the possible properties of cannabidiol (or "CBD", one of the naturally-occurring cannabinoids of the *Cannabis* plant) as an intervention tool for substance use disorders[67].

Balancing negative and positive effects of cannabinoids in the treatment of cancers.

Evidence shows that the use of *Cannabis* products themselves do not increase lung, head, or neck cancers[68]; however, consumption patterns (i.e., mixed with tobacco) can be a factor of increased risk of cancer. Such a threat can be tackled with appropriate harm reduction and education to safe and healthy uses and routes of administration[69]. Beyond this minor direct incidence of the use of *Cannabis* on cancers[70], there is "a wealth of preclinical literature [demonstrating] that cannabinoids reduce cancer cell proliferation, inducing apoptosis in these cells, as well as inhibiting cancer cell migration and angiogenesis in numerous cancer cell types"[71].

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63 Bradford et al., 2018; and Wen and Hockenberry, 2018.
64 Purcell et al., 2019.
65 "The endocannabinoid system (ECS) is a widespread neuromodulatory system that plays important roles in central nervous system (CNS) development, synaptic plasticity, and the response to endogenous and environmental insults. The ECS is comprised of cannabinoid receptors, endogenous cannabinoids (endocannabinoids), and the enzymes responsible for the synthesis and degradation of the endo-cannabinoids. The most abundant cannabinoid receptor is the CB1 cannabinoid receptors, however CB2 cannabinoid receptors, transient receptor potential (TRP) channels, and peroxisome proliferator activated receptors (PPAR's) are also engaged by some cannabinoids. Exogenous cannabinoids, such as tetrahydrocannabinol, produce their biological effects through their interactions with cannabinoid receptors" (Lu and Mackie, 2016).
66 Samson et al., 2003.
67 Prud'homme et al., 2015.
68 Arnold, 2018.
69 See above under "Management of Cannabis use disorders for health", and under Goal 4.
70 McAllister, 2015. See also Technion (s.n).
71 Arnold, 2018.

Furthermore, *Cannabis*-based medicines can be seen as a reinforcing complement in traditional cancer treatment[72].

Exploring the potential of *Cannabis* in opioid use withdrawal and substitution therapies.

Increased research has shown that *Cannabis* and cannabinoids interact with opioid receptors in a manner that can be understood, monitored, and integrated into treatment designs. Places with a historical overview of the legal uses of *Cannabis* products for medical purposes bring interesting data from pharmacovigilance and epidemiology studies: The increased availability of prescription

Prescription herbal *Cannabis* and cannabinoids are always associated with a decrease in the prescription of opioid painkillers[73]. Furthermore, the degree of access to *Cannabis* and cannabinoids for medical purposes seems to be positively correlated with the reduction of opioid use disorders[74].

This can bring added therapeutic value in prescription drug programs for pain[75], allowing **opioid-cannabinoid intermixed treatments** and **reducing the adversity of opioid use disorders**. Cannabinoids could also be contemplated in illicit opioid use substitution therapies, in association with conventional pharmaceutical tools.

Fighting tobacco and nicotine use disorders: modulating herbal *Cannabis* use disorders.

Dried flowers & fruits of psychoactivity-related *Cannabis* (known as "buds", "flowers" or "**herbal *Cannabis***") with low levels of Δ^9-THC are sold legally in a number of countries, including in some jurisdictions where the possession or use of *Cannabis*-based products is theoretically prohibited. In Switzerland, these herbal *Cannabis* products – sold as tobacco substitutes[76] – are used by regular cannabis consumers to mitigate their THC intake[77]. ***Cannabis*-based products are indeed promising tools for tobacco cessation strategies**[78].

In addition to low-THC herbal *Cannabis*, which is promoted as a tobacco-replacement in mixed tobacco-herbal *Cannabis* joint cigarettes (a common practice in some parts of the world, like Northern-Africa and Europe), so-called "e-liquids" containing CBD, for use in electronic cigarettes, might help mitigate the craving effects associated with tobacco dependence, while diverting users from combustion as a route of intake.

There are also pathways to using low-Δ^9-THC and/or high-CBD *Cannabis* products as substitution tools to address high-Δ^9-THC herbal *Cannabis* use disorders.

These are important elements which are key to implement the WHO Framework Convention on Tobacco Control.

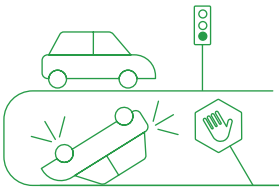
72 See also under target 3.3.
73 Lucas, 2012; Bradford et al., 2018; and Wen and Hockenberry, 2018.
74 Powell et al., 2018.
75 Boehnke et al., 2016 pp. 739-744.
76 Swiss Confederation, 2018.
77 Zobel et al., 2019.
78 Bouso, s.d.

Rethinking home-growing as a positive behavioural therapy.

In every case of the potential use of *Cannabis* products for substitution strategies – and potentially beyond, such as for elderly[79] – modern treatments can enhance positive effects through a **holistic approach that relies on the concept of "therapeutic horticulture"**[80] considering plants from cultivation to consumption as a non-pharmacological therapeutic agent. This approach sees **gardening as an evidence-based[81] way to positively affect a range of problems, including reducing aggression, lowering levels of cortisol, reducing anxiety or depression**, improving concentration and self-esteem.

"Hemp" *Cannabis* vs NCDs.

Food and food products made from *Cannabis* seeds supply the exact ratio of essential fatty acids omega-6 and omega-3 the human body requires[82] as well as provide essential amino acids in the form of Edestin protein, a molecule similar to the human body's globular proteins found in blood plasma, which is easily digestible, and that produces antibodies which are vital to maintaining a healthy immune system. *Cannabis* seed protein also contains a favorable amount of glutamic acid, a neurotransmitter that helps people deal with psychological stress.



Target 3.6
By 2020, halve the number of global deaths and injuries from road traffic accidents.

The relation of *Cannabis* and cannabinoids with road traffic accidents is difficult to establish[83], due to the difficulty in determining whether people are under the influence at the moment of the traffic accident: Most data refer to people having consumed *Cannabis* products prior to the accident, not necessarily being under the influence.

In studies of non-fatal collisions, and when levels involved are below 5 nanograms of Δ^9-THC per milliliter of blood, most case-control studies revealed no increase, if not a decrease of the risks of having a road traffic accident[84]. And indeed, the well-known empirically safe patterns of driving by people who use *Cannabis* products adds to the difficulty of weighing the pros and cons.

79 See the video of the conference "Case Study - Cannabis & Elderly People: Harm Reduction, Hospice & Palliative Care" from the International Cannabis Policy Conference (2018): youtu.be/RXtl1yhSXZE
80 American Horticultural Therapy Association, 2013.
81 Van Den Berg, 2005.
82 See also Goal 2.
83 Canadian Drug Policy Coalition, 2017.
84 Ramaekers et al., 2002; Meulemans et al., 1996; Marquet et al., 1998; Movig et al., 2004; and Waller et al., 1997; as referenced by Bertrand, 2018.

The analysis of data over 22 years has shown that laws permitting medical cannabis do not have a significant effect on the number of people who use *Cannabis* products involved in fatal road traffic accidents[85].

A recent meta-analysis[86] and national data on road accidents[87], which included a comparison on the notion of recent consumption (either by blood test or by self-report), concluded that the added risk of having an accident is 1.92 for *Cannabis* products, compared to 8.5 for alcohol, 3 for the use of mobile phone while driving, and 2 for benzodiazepines[88].

Yet, Norwegian researshers found that people who use *Cannabis* are "far more likely to have lost their right to drive than those in treatment for alcohol problems."[89] Trace amounts of cannabinoids in blood are typically detectable for 1 to 2 days after the moment of consumption, although there are reports where detection was still positive after 25 days[90]. In urine, Δ^9-THC is detectable during between 3 and 30 days after the moment of consumption[91]. In a review of presence of cannabinoids in human oral fluids (saliva), it was found that detection was possible from 1 to 3 days after the moment of consumption for occasional users, and between 1 to 29 days for regular users[92].

However, not only the machines used for saliva testing are woefully unreliable[93] and unpredictable[94], but the use of drug saliva tests by law enforcement cause serious concerns in terms of discrimination[95]: Saliva tests used for *Cannabis* often entail administrative or penal consequences when the mere presence of cannabinoids is detected[96] – while there is an evidence-based threshold for alcohol, below which drivers are not considered "under the influence"[97]. In other jurisdictions, arbitrary thresholds lacking any base of evidence are used to determine when penal sanctions should apply, although these thresholds are unrelated with the effect of the product[98]. As traces of cannabinoids can be present for several weeks, drivers can be tested positive even after the effects of the product have stopped for days[99].

In addition, Martinez Óro and Romaní Alfonso (2016, p. 39) note that "in cases of accidents, liability is attributed without any doubt to the driver under the effects of a controlled substance. Demonstrating to the insurers that the main cause were climatic factors or third parties, and not drugs, represents a titanic task."

Evidence-based policies should be applied in all cases. And laws proven to be discriminative should be repealed. Driving motor vehicles on the basis of simple presence of cannabinoids should cease to

85 Sevigny, 2018.
86 Asbridge et al., 2012.
87 Laumon et al., 2005; Institut national de la santé et de la recherche médicale, 2001.
88 Thomas, 1998. See also Sevigny 2018, Asbridge et al. 2012, Institut national de la santé et de la recherche médicale, 2001.
89 Nafstad, 2019.
90 Verstraete, 2004.
91 Moeller et al., 2016.
92 Lee and Huestis, 2013; and Verstraete, 2004.
93 Samyn and Van Haeren, 2000.
94 Logan et al., 2014.
95 Brotons, 2018.
96 Although Karschner (2009) explains in the conclusion of their research that "These findings also may impact the implementation of per se limits in driving under the influence of drugs legislation."
97 Martínez Oró and Romaní Alfonso, 2016 p. 39.
98 Karschner et al., 2009.
99 Cifuentes, 2017.

be criminalized. But given the impossibility of determining thresholds incompatible with driving from the measurement of THC levels in the blood, and given the lack of clear causal connection between *Cannabis* use and road traffic accidents and fatalities, Bertrand (2018) recommends to "abandon bioassays, and **train police forces to carry out psychometric tests** to determine the cases of impaired driving" and to only punish with administrative sanctions "impaired driving (on the basis of psychometric tests)."[100]

Target 3.d
Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

Operational Recommendations from the UNGASS 2016 Outcome Document

1- demand (o)	3- supply (h)	6- cooperation (d)

Early warning alerts for health-related risk reduction matters under illegal *Cannabis* markets. Risks of impurities, contaminants and adulteration of herbal *Cannabis* (as well as resin, extracts or other products manufactured in illegal settings) is real. International institutions have documented *Cannabis* resin sold in the illicit market as containing harmful contaminants from 1953[101] to present[102]. The variety and variability of cutting agents used in *Cannabis* resin constitutes a major health risk and hazard. Feedbacks from "users and cannabis watchers often mention the presence, sometimes in large quantities, of soil, henna, paraffin wax, bee wax, rosin, glue, flour, liquorice, milk powder, coffee, used motor oil, animal excrement, or even medical drugs"[103], and are supported by the results of the British Cannabis Resin Impurities Survey Project (CRISP)[104], which found that resin seized often showed very high levels of contaminants, sometimes up to 80% of the weight of the product.

Increased pharmacovigilance, normalization of *Cannabis* product production and testing analysis (both by relevant public authorities and by civil society and the private sector), efficient share and use of collected data by local health and social workers, and training in harm reduction interventions are necessary steps to strengthen countries' early warning and risk reduction systems facing drug use-related hazards.

100 Bertrand, 2018. See under section "Les recommandations politiques NORML France"
101 UNODC, 1953.
102 EMCDDA, 2012.
103 Chouvy, 2016.
104 "Cannabis Resin Impurities Survey Project conducted preliminary research in 2001 on five samples of Moroccan 'soap-bar' resin provided by Customs & Excise. It was found that the psychoactive adulterants included glue (benzene and toluene), ketamine, caffeine, and aspirin – while other additives, varying in toxicity, included liquorice, milk powder, boot polish, beeswax, turpentine, henna, vinyl, motor oil, dyes, pine resin, animal shit, soil, and phenols" (Montgomery, 2002).

QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

GOAL 4: KEY POINTS & RECOMMENDATIONS

The barriers to research and the lack of knowledge-sharing that prohibition has resulted in numerous gaps in ethnobotanical, health and safe consumption knowledge, that public policies should seek to promote prevention and education on Cannabis products use that is grounded in evidence-based information, non-judgmental, open to interactive dialogue, meaningfully inclusive, delivered by trained facilitators or peers, that includes harm reduction, and that pays attention to overlapping issues of racism, social justice, and stigma.

Evidence-based and peer-led education and prevention in primary schools is necessary to help young people make smarter, more informed choices on Cannabis products use later on.

Governments should shift public spending on drugs, from law enforcement to health (in particular harm reduction, prevention, and education programs).

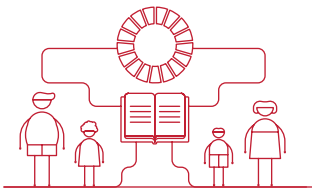
The knowledge gap on the professions required to operate in legally regulated Cannabis markets (biosciences, horticultural, agronomics, consumers good fabrication, sales, etc.) should benefit from the financial resources created by Cannabis market regulations, to fund professionals' training, as well as cultural and environmental education.

A way to provide opportunities for youth and adults with efficient, but unrecognized technical and entrepreneurship skills related to Cannabis: funding educational programs that target young adults already involved in illegal Cannabis-related activities (in particular cultivation, processing, and retail) to enhance existing skills while dignifying and preserving traditional knowledge.

Target 4.4
By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

Operational Recommendations from the UNGASS 2016 Outcome Document	
3- supply (b)	7- development (h) (j)

The increased **financial resources introduced by *Cannabis* market regulations can be partly redirected towards the training of the professionals required to operate in regulated markets** (biosciences, horticultural, agronomics, consumers good fabrication, sales, etc.). They can also be shunted to cultural and environmental education. Such educational programs, targeting young adults already involved in illegal *Cannabis*-related activities (in particular cultivation, processing, and retail), would enhance existing skills while dignifying and preserving TK. These are ways to provide opportunities for legal employment outcomes for youth and adults with efficient, but unrecognized technical and entrepreneurship skills.



Target 4.7
By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

Operational Recommendations from the UNGASS 2016 Outcome Document	
1- demand (a) (c) (d) (e) (h) (g) (i) (o) (q)	4- rights (f)
6- cooperation (d)	7- development (h) (j)

A non-stigmatizing, non-discriminatory, evidence-informed, and realistic address of the effects of psychoactive plants, products, and substances, such as *Cannabis* – although absolutely necessary[105] – is nearly impossible in a prohibitionist setting. Evidence-based and peer-led education and prevention in primary schools helps empower young people to make smarter, more informed choices on drug and psychoactive products use later on[106].

Increasing the creation and dissemination of all knowledge concerning the *Cannabis* plant would contribute to the appreciation of cultural diversity and the preservation of ethnobotanical knowledge, facilitating a culture of sustainable development. Increased research and non-stigmatizing, non-discriminatory, evidence-informed, and unbiased prevention and education are also urgently needed for quality modern education programs and systems.

Ethnobotanical knowledge and information about *Cannabis* have been minimal during the last decades. This is related to the barriers preventing research and the lack of knowledge-sharing the international drug control system has caused, but also partly due to stigmatization and criminalization, which have promoted bias and legitimated misinformation. These factors have impeded the dissemination of harm reduction information related to the use of products derived from the *Cannabis* plant. A comprehensive compilation of efficient contemporary education and prevention for *Cannabis* use, focused on the youth, defined the principles that should guide education programs on *Cannabis* use: grounded in evidence-based information; non-judgmental, open dialogue that uses interactive approaches; meaningfully inclusive; delivered by a trained facilitator or by a peer; an education started earlier, with age-appropriate content; supportive to open parent-child communication; including harm reduction; tailored to the specific context; and paying attention to overlapping issues of racism, social justice, and stigma[107]. These approaches can be promoted by public health policies[108], and even meet with the international WHO guidelines for prevention and primary care[109].

However, harm reduction and honest, evidence-based prevention are the only public policy tools that have shown efficiency in mitigating the adverse public health effects of *Cannabis* products use. Because in almost every country, "spending on drug control exceeds investment in harm reduction"[110] and prevention, it is urgent that authorities start shifting their drug and *Cannabis* policy budgets towards an increase in public funding for education, prevention and harm reduction programs.

Many young people grow up in areas where DTOs are actively implemented, and economic activity is centered around illicit crops, mainly *Cannabis*. Proposing alternative legally regulated livelihoods associated with this plant could greatly contribute to the promotion of a culture of peace, non-violence, and the rule of law[111].

105 Werb and Maghsoudi, 2015.
106 Peyraube, 2015.
107 See Goal 4; and Canadian Students for Sensible Drug Policy, 2018; Colorado Department of Public Health and Environment (s.d); Werb and Maghsoudi, 2015.
108 Colorado Department of Public Health and Environment (s.d).
109 See Díaz Velásquez et al., 2016, pp. 95-101
110 Harm Reduction International, s.n.
111 Romani Gerner, 2017.

GENDER EQUALITY

Achieve gender equality and empower all women and girls.

GOAL 5: KEY POINTS & RECOMMENDATIONS

Decriminalization of petty, non-violent Cannabis-related offences is key to protecting women, that are the focus of criminal prosecution, and systematically face disproportionate penalties, and degradant conditions of incarceration.

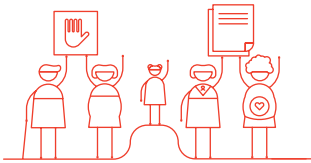
Specific criminal justice measures targeting women (e.g., withdrawal of child custody, hampering of the exercise of family rights) must be abolished without delay.

National and local health systems and programmes should pay specific attention to the specificities of female Cannabis use, and gender-specific differences in health prevention, primary care and treatment approaches, as gender conditions are recognized as a problematic barrier in accessing healthcare systems.

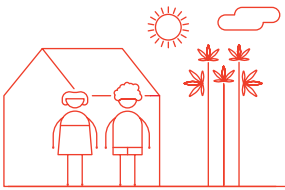
The differential impact of the Cannabis-related problems and policies on women calls for the design, development, and implementation of specific frameworks to promote, enforce, and monitor gender equality and non-discrimination. Policies and strategies regarding Cannabis products use & health should adopt woman-specific approaches, and include and consult with women and affected populations at all levels.

Female leadership in the legal Cannabis industry is superior to that of other market sectors, which deserves monitoring and encouragement.

Policies that include asset forfeiture and seizure of a Cannabis farmers' land must be repealed, as they predominantly and disproportionately affect women.



Target 5.1
End all forms of discrimination against all women and girls everywhere.



Target 5.a
Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

Operational Recommendations from the UNGASS 2016 Outcome Document

1- demand	3- supply	4- rights
(d) (k)	(b)	(b) (d) (g) (n)

6- cooperation	7- development
(d)	(h) (j)

Women are disproportionately affected – and impoverished – by prohibitive and repressive *Cannabis* and drug control policies[112], suffering particularly from discriminatory policies by law enforcement and an overwhelmingly harsh judicial system[113]. Since women are often a primary financial contributor to families and communities, the consequences of such policies affect the community as a whole.

Discrimination against women in law enforcement and criminal justice settings.

Women, particularly young women, when involved in illicit activities related to *Cannabis*, are the focus of criminal prosecution, and **systematic disproportionate penalties and conditions of incarceration**. In the last decade, the number of women imprisoned for non-violent drug-related misdemeanours has alarmingly increased. In Argentina, Brazil, Costa Rica, and Peru, well over 60 % of the country's female prison population is incarcerated for drug-related crimes[114], while it reaches 45% in some European countries such as Spain[115]. Most of these sentences relate to *Cannabis*.

112 UN Women, 2014.
113 WOLA, 2016.
114 WOLA & TNI, 2011.
115 Iakobashvili, 2012.

In some countries, **specific criminal justice measures targeting women**, such as the withdrawal of child custody or the hampering of the exercise of family rights, occur – with **devastating consequences for families and communities**.

Female involvement in illicit *Cannabis*-related activities also encapsulates negative collateral outputs[116]. According to UNODC, "some women involved in trafficking in drugs are victims of trafficking in persons, including trafficking for the purposes of sexual exploitation. Women's participation in the drug supply chain can often be attributed to vulnerability and oppression, where they are forced to act out of fear"[117].

Discrimination against women in health care settings.

Gender conditions are a problematic barrier for access to healthcare systems. These gender conditions vary significantly according to regions and social contexts[118]. Likewise, gender differences both in the use of *Cannabis* products and in correlated use disorders have been established[119]. This requires specific attention be given to the gender-specific differences in health prevention, primary care and treatment approaches.

In addition, the differential impact of the *Cannabis*-related problems and policies on women makes these particularly needed in the design, development, and implementation of a **framework to promote, enforce, and monitor gender equality and non-discrimination**. International, national, and local strategies regarding *Cannabis* products use & health not only should adopt woman-specific approaches, but also consider **women and affected populations' involvement at all levels.**

Promoting a gender-sensitive model for legal *Cannabis* markets.

More and more women are claiming their place in the emerging *Cannabis* legal private sector, especially in the scientific and therapeutic segments. **Female leadership in this industry has made its way through, and today, women are beginning to be leaders in this field.** Bias in favour of men is not as marked as in other sectors: in the United States of America, women represented 27% of executives in the *Cannabis* market in 2017, surpassing the average 23% of women in executive positions in other economic sectors[120]. This trend should be monitored and further studied.

Providing equal rights and access to ownership and control over land.

Similar to what is explained under target 1.4, achieving Goal 5 implies the repeal of policies that include provisions for asset forfeiture and seizure of a *Cannabis* farmers' land – where women have a predominant role and suffer from disproportionately repressive outcomes.

While women are often responsible for the cultivation of illicit crops, they are likely not land owners since less than 20% of women in the world are land owners.

116 Ochoa and Chulver, 2019.
117 UNODC, 2018(2)
118 WHO, 2007.
119 Sherman et al., 2016.
120 McVey, 2017.

AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all.

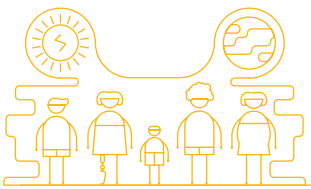
GOAL 7: KEY POINTS & RECOMMENDATIONS

The capacities of Cannabis fibers for both production and storage of energy can help ensure sustainable, reliable, and green energy for all, while decreasing dependency on fossil resources.

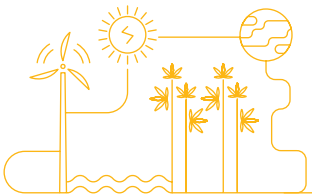
Indoor Cannabis cultivation using artificial light, heat, ventilation, humidity systems, automation, and irrigation are fruit of prohibitive policies: legal regulations should seek to incentivize greenhouse or outdoor methods of cultivation that have less detrimental impact on the environment, and have an extremely low carbon footprint.

Market development of carbon nanosheets for electrodes made out from residual wastes of Cannabis plants, that outperform standard graphene-based supercapacitors, should be encouraged.

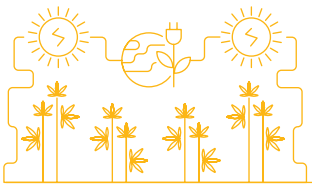
Incentives to sustainable cultivation patterns should be mainstreamed in Cannabis-related policy reforms, and include tools such as standardization, incentives of professional field-bodies able to edit peer guidelines, limitation of the rate of indoor cultivation authorized per business, or application of a carbon-tax model to indoor Cannabis cultivation facilities.



Target 7.1
By 2030, ensure universal access to affordable, reliable and modern energy services.



Target 7.2
By 2030, increase substantially the share of renewable energy in the global energy mix.



Target 7.3
By 2030, double the global rate of improvement in energy efficiency.

Target 7.a
By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.

Accelerate climate action for all Sustainable Development Goals.

Operational Recommendations from the UNGASS 2016 Outcome Document

4- rights	6- cooperation	7- development
(i)	(d)	(j)

Non psychoactivity-related derivatives of *Cannabis* are worthy of inclusion to reach SDG 7, as the plant can provide **both production and storage of energy**. Beyond **ensuring sustainable, reliable, and green energy for all**, energy-producing and -storing crops such as *Cannabis* are key to **decreasing dependency on fossil resources**, to mitigate climate change.

Locally producing & storing energy with *Cannabis* plant biomass.

A high biomass yield coupled with a low-cost feedstock, ease of cultivation, and the suitability of adding *Cannabis* into existing crop rotations, characterize "hemp" as a renewable option for the production of biofuels[121]. Energy access is better ensured when produced domestically or locally. More local *Cannabis*-biomass power plant supplies, using crop wastes, could significantly contribute to the universality of access year-round and the affordability of prices.

Recent research has shown that the **residual wastes of *Cannabis* plants can also be turned into carbon nanosheets** that have shown remarkable efficiency to produce electrodes, outperforming standard graphene-based supercapacitors[122].

Making psychoactivity-related *Cannabis* crops sustainable and energy-saving.

Illegal *Cannabis* cultivation has created the phenomenon of indoor cultivation, using artificial light, heat, ventilation, humidity systems, automation, irrigation, etc. While this method of cultivation has an extremely detrimental impact on the environment, **regular methods of cultivation (in particular outdoor and greenhouses) have an extremely low carbon footprint**.

Aside from the production of standardized *Cannabis*-based medicine wherein a fully controlled growing environment is a prerequisite, legal regulations seem to bring a trend towards the abandonment of warehouse-type *Cannabis* cultivation in favour of greenhouses[123]. Growers are viewing greenhouses as an economical solution (production costs are cut by 30% compared to indoor cultivation) and public authorities are sometimes encouraging emerging legal *Cannabis* markets to adopt sustainable production patterns to reduce their energy consumption and carbon footprint[124]. Regulating *Cannabis* policies and promoting natural sunlight as the primary lighting source rather than electrical sources is key to rationalizing energy consumption and waste.

Warehouse indoor cultivation of *Cannabis sativa* L. initially appeared as a strategy for growers to avoid flagging and eradication of their plantations. Today, indoor cultivation is widely spread, in particular in developed countries – there is no other crop being so extensively cultivated away from the sunlight.

Indoor Cannabis cultivation – which basically consists of creating an environment similar to natural growing conditions for the plants, maintaining high-intensity lighting levels and controlling other parameters, such as

121 Rehman et al., 2013.
122 Wang et al., 2013.
123 Cannabis Business Times, 2018.
124 Denver Department of Public Health & Environment, 2018(1).

humidity, temperature or air pressure[125] – is exceptionally harmful to the environment and energy-wasting. "Indoor cannabis cultivation uses the largest amount of energy when compared to any other production method, and creates the largest associated carbon footprint"[126]. Estimations made in California, United States indicate that indoor cultivation accounts for about 3% of the State's electricity use, generating an average of 4 kilograms of CO2 per gram of cannabis cultivated indoor[127].

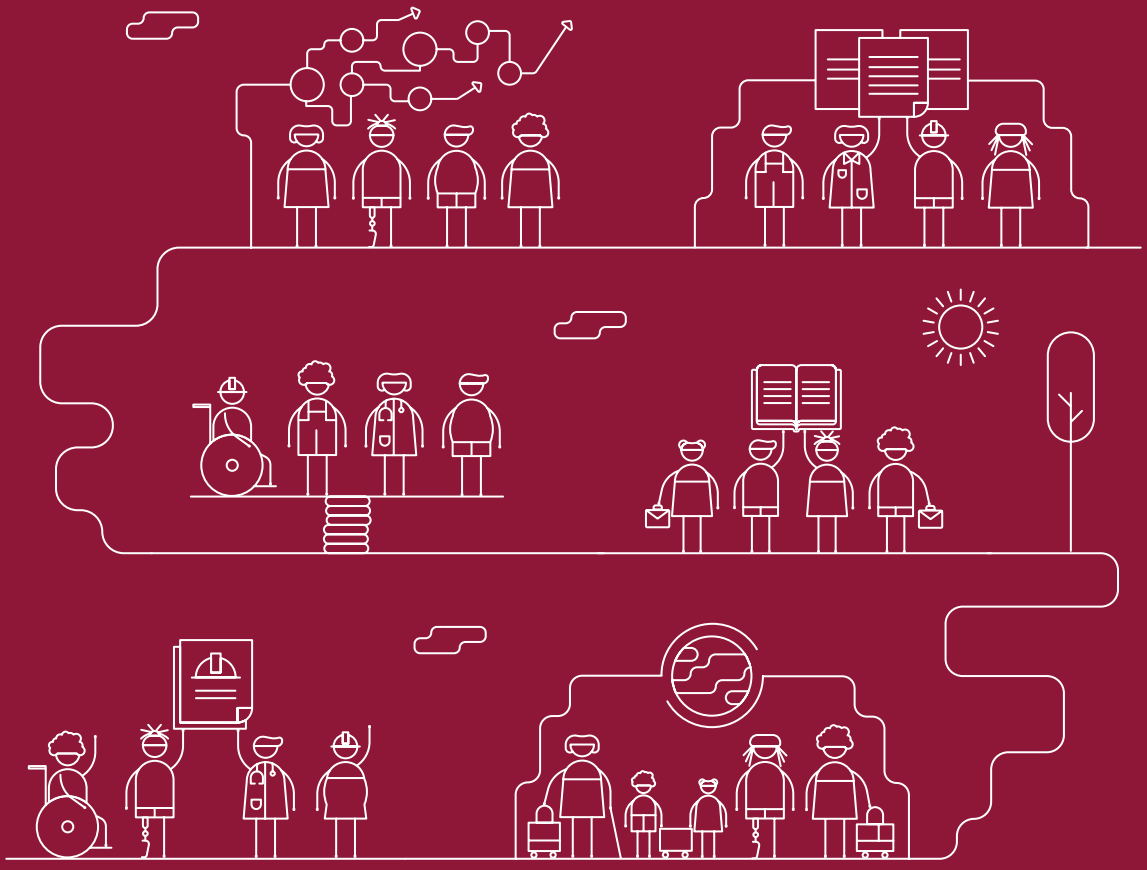
In Colorado, another state in the same country, the legal regulation of production processes has resulted in an increase in *Cannabis* cultivation outdoors or in greenhouses. Across this country, in three years, indoor cultivation decreased from 80% to 65%, to the benefit of the less energy-intensive growing practices (e.g., outdoor and greenhouse cultivation)[128]. Local authorities have created incentives for legal *Cannabis* cultivation companies to adapt their production methods, including workshops on natural sunlight cultivation methods, publication of guidelines, and elements of sound and sustainable practices, etc.[129].

Such **incentives to enable sustainable cultivation patterns should be mainstreamed** in *Cannabis*-related policy reforms to ensure efficiency and sustainability of crops while contributing to meeting Goal 7. Policies should contemplate tools, such as **standardization**, the incentives of **professional field-bodies**, the limitation of the rate of indoor cultivation authorized per business, or the application of a **carbon-tax** model to indoor *Cannabis* cultivation facilities.

125 Johnson and Miller, 2011.
126 Denver Department of Public Health & Environment, 2018(2)
127 Mills, 2012; Ponce, 2018.
128 Cannabis Business Time, 2018. Page 5.
129 Denver Department of Public Health & Environment, 2018(1&2).

DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.



GOAL 8: KEY POINTS & RECOMMENDATIONS

Working in illegal settings is inherently unsafe, unsecure and never as decent as working in legally regulated settings. Lack of regulatory protections, workplace safety oversight and insurance, but also constant pressure and treats from DTOs and law enforcement agencies, make labour in illicit settings a preliminary and central target of policy reforms.

Forced or compulsory labour in relation with illegal Cannabis-related activities should be targeted with priority, in particular as it relates to exploitation or human trafficking.

Criminalising and judicialization of people who use Cannabis contributes to increasing stigma and marginalisation, acting as a barrier to job and employment.

All forecasts on the development of legally regulated markets for Cannabis show the expected positive impact on job and employment.

Large legal Cannabis industries develop new technologies for cultivation, fertilization, processing, and manufacturing of the plant. Small-scale cultivators tend to focus on regenerative agricultural methodologies, increases in productivity and sustainability and reduction of their environmental impact. Both are needed in legally regulated settings. Public policies should adopt social and sound tax policies that are differentiative, in order to foster local investment and ownership over legal Cannabis operations for all.

In all cases (even for larger businesses) taxes waged on Cannabis businesses should be reasonable and proportionate, for legal market to compete prices of the illegal market.

Cannabis policies should encourage the diversification of Cannabis farms production, relying also on non psychoactivity-related purposes derived from the plant, to propose products such as clothing, cosmetics, paper, food, beer, biofuels, animal bedding, building materials, insulation, car moldings, and other consumer and industrial products.

Legally regulated Cannabis cultivation, manufacture, and trade are suitable to village-development and local employment of women and youth, as most jobs in the sector are capable of being performed by young people, or by people with disabilities. It is also suitable for cities or suburbs where job opportunities are scarce in middle- and high-income countries.

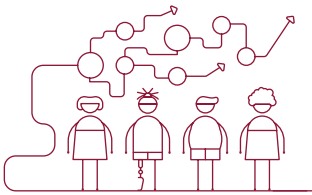
The cultivation of Cannabis to tackle depopulation in remote villages is currently implemented, and encourages people to engage in long-term jobs in the rural Cannabis production sector. Such programmes should be encouraged as experimentations to foster rural development.

Governments should assist and monitor the transition of populations previously involved in Cannabis cultivation, from an illicit to a regulated and taxed market, and take particular care in ensuring that legal regulations benefit the people that are reliant on this income. Opportunity must be seize to help small-scale farmers transition to legal settings, ensuring that opportunities are also given to small and medium-scale operations.

Authorities must ensure that financial and insurance services are not denied to legal Cannabis-related operations.

Cannabis has a long historical relationship with travels, travelers, and tourism, and the plant magnifies the development of tourism, particularly in regions where its use or cultivation are traditional. Yet uncontrolled or unregulated tourism can cause social dislocation, loss of cultural heritage, economic dependence or ecological degradation. Sustainable tourism guidelines and indicators should be contemplated, and multimodal tourism (combining agro-tourism, eco-tourism, therapeutic/health tourism) should be preferred.

Local communities in traditional areas of cultivation would benefit from the potential of Appellations of Origin to promote sustainable tourism, increase job creation, community ownership, and promote while preserving local cultures, knowledge, and products.



Target 8.2
Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value-added and labour-intensive sectors.

Operational Recommendations from the UNGASS 2016 Outcome Document

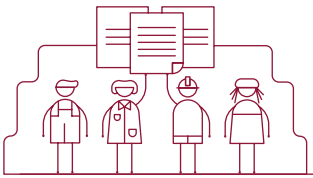
6- cooperation	7- development
(d)	(h) (i) (j) (k) (l)

All *Cannabis* crops (both small-scale and large industrial scale operations) are labour-intensive. While large legal *Cannabis* industries are developing new technologies for cultivation, fertilization, processing, and manufacturing of the plant, small-scale cultivators tend to focus on regenerative agricultural methodologies enabling them to increase productivity and sustainability while reducing their environmental impact.

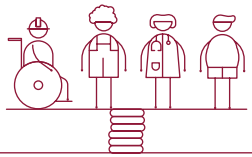
In the United States of America, forecasts show that legal *Cannabis* industries could produce between $21 and $48 billion in 2022[130]. Such growth of the market is an important factor that is expected to have a positive impact on investment and employment, among others. Financial speculation related to the emerging *Cannabis* industries should be monitored to ensure that profits are reinvested in the economy. Public policies should **adopt social and sound tax policies** that can be **differentiative to foster local investment and ownership** over legal *Cannabis* operations. In all cases, even for larger facilities, the taxes waged on *Cannabis* businesses should be reasonable, otherwise legal businesses will hardly competing the underground market in terms of price point[131].

Diversification is a key word for future *Cannabis* farmers, as diversity is what most characterizes the *Cannabis* plant, its possible uses, and the populations that make use of it. An increased use of *Cannabis* for non psychoactivity-related purposes can have positive economic consequences, as hundreds of potential products – including high-value-added products – derived from the plant have been identified, such as clothing, cosmetics, lotions, shampoos, soaps, paper, food, feed, beer, biofuels, animal bedding, building materials, insulation, car moldings, among many other consumer and industrial products.

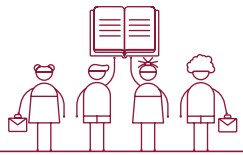
130 Arc View Group, 2018; New Frontier Data, 2018.
131 "Although tax revenues climbed throughout 2018 [...] the totals reflected a state government caught off-guard by a resilient underground market" (Marijuana Business Daily, 2019)



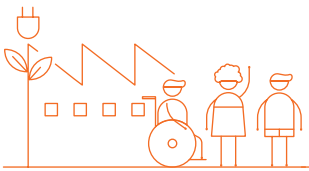
Target 8.3
Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.



Target 8.5
By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.



Target 8.6
By 2020, substantially reduce the proportion of youth not in employment, education or training.



Target 9.2
Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries.

Operational Recommendations from the UNGASS 2016 Outcome Document

5- trends	6- cooperation	7- development
(u) (v) (x) (y)	(d)	(h) (i) (j) (k) (l)

Legal *Cannabis* markets create job opportunities, promote innovation of new products (in particular, with diversified crops merging *Cannabis* cultivation for both psychoactivity-related and non psychoactivity-related purposes), and can encourage the growth of locally owned businesses of all sizes if socially sustainable policies are implemented. During the year after US state of Colorado regulated adult use sales, the legal *Cannabis*-related sector created 18,000 full-time equivalent job positions in-state and a US$2.4 billion

economic revenue[132]. In Uruguay, it was estimated that the different legal operations generated the equivalent of US$22 million, with unaffected prevalence rates[133], making likely that this amount was directly taken from the margins of profit of DTOs[134]. ***Cannabis* cultivation, manufacture, and trade are suitable to village-development** and local employment of women and youth, as **most jobs in the sector are capable of being performed by young people, or by people with disabilities**. Policies are key.

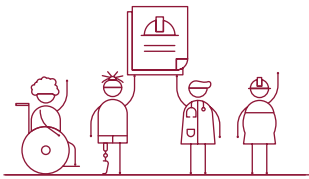
This is not only valid for *Cannabis* farmers, as "**even in middle- and high-income countries, in cities or suburbs where job opportunities are scarce** and social cohesion is weak, drug trafficking and dealing may represent attractive opportunities in the absence of better alternatives in the legal economy"[135].

Meanwhile, the evidence that "criminalising people who use drugs merely increases stigma and marginalisation, acting as a barrier to education, employment, health and social services" still stands unaddressed[136].

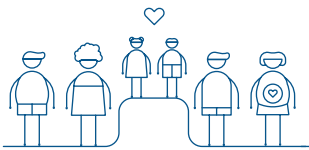
In developed countries, a large number of youth are unemployed and live outside of urban settlements – which adds difficulty when looking for job or education opportunities. In Poland, young people are forced to move to cities to overcome these issues[137]. In Spain where the same problems exist, the adversities of post-2008 economic crisis led villages to launch calls for the cultivation of *Cannabis* as a measure to tackle their depopulation, with the aim to mobilize people to stay and engage in long-term jobs in the local sector of *Cannabis* production[138].

Assisting and monitoring the transition of populations involved in *Cannabis* cultivation from an illicit market to a regulated and taxed market is key to achieving Goal 8. Authorities should take particular care in ensuring that legal regulations of local or international trade in *Cannabis*-based products **benefit the populations that are reliant on this income**, and seize the opportunity to help small-scale farmers transition to legal settings[139]. **Regulating authorities should also ensure that financial services are not denied to legal *Cannabis*-related operations**[140], and that **equal opportunities are given to small and medium-scale operations rather than exclusively to large corporate companies**.

132 Marijuana Policy Group, 2016.
133 According to Musto and Robaina (2018), the trends in increased use of Cannabis in Uruguay, observed since 2001, was affected in a minor extent by policy reforms. These findings confirm those of the European Monitoring Center on Drugs and Drug Addiction (EMCDDA, 2018(1), p. 22) according to which policy changes, either towards more repressive or more permissive enforcement, do not affect consumption rates.
134 Instituto de Regulación y Control del Cannabis, 2019.
135 OAS, 2013.
136 GCDP, 2018. p 5. See more under Goal 10 and 16.
137 Ministerstwo Rodziny, Pracy i Polityki Społecznej; Departament Rynku Pracy, 2014.
138 In 2012, the village of Rasquera (Catalonia, Spain) voted locally at 56% in favour of a city-led licit Cannabis cultivation (Villarreal, 2012), and in Santa Cruz de los Cañamos, a village which historic symbol includes a leaf of the Cannabis plant, a project is currently ongoing to grow hemp against depopulation (Castilla-La Mancha Media, 2018)
139 Bramall, 2018.
140 Unlike what happened in Uruguay, for instance, where pharmacies were denied access to their bank accounts and threatened for legally selling Cannabis-based products. (Martínez, 2016)



Target 8.8
Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.



Target 16.2
End abuse, exploitation, trafficking and all forms of violence against and torture of children.

Operational Recommendations from the UNGASS 2016 Outcome Document	
4- rights (d)	5- trends (u) (v) (x) (y)
6- cooperation (d)	7- development (h) (i) (j) (k) (l)

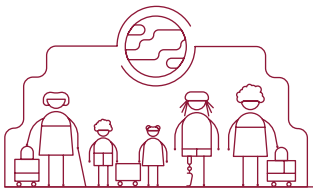
Working in illegal settings is inherently less safe, secure and decent than working in legally regulated settings. Not only the absolute lack of regulatory protections, workplace safety oversight and insurance, but also constant pressure and treats from DTOs and law enforcement agencies, make labour in illicit settings be a **critical element in achieving Goal 8**.

The involvement in illicit drug- and *Cannabis*-related activities is a major source of lack of labour rights, when not direct exploitation, forced, or compulsory labour, or human trafficking[141]. **Children and youth are not left apart**[142] – they are known to be particularly vulnerable to forced recruitment for "illicit activities, in particular for the production and trafficking of drugs"[143].

The International Labour Organization (ILO) finds that "forced labour is [...] organized [...] around international criminal gangs who find the trafficking of humans to be less dangerous than trafficking of drugs. Much forced labour involves underground or illegal activities and is otherwise hidden from public view"[144].

141 Shelley, 2012; and Levy-Pounds, 2009.
142 Bulman, 2017.
143 ILO, 1999.
144 ILO, 2001.

Although **there is a shortage of data** on this topic, **forced, or compulsory labour in relation with illegal *Cannabis*-related activities controlled by DTOs** is starting to be studied. In Ireland, researchers found that the lack of data on the trafficking in human beings for purposes of illicit *Cannabis* cultivation, and the lack of awareness by authorities, was leading potential victims to be prosecuted, convicted, or imprisoned for offences they may have been forced to commit[145].



Target 8.9
By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.

Target 12.b
Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products.

ACCELERATE CLIMATE ACTION FOR ALL SDGs

Accelerate climate action for all Sustainable Development Goals.

Operational Recommendations from the UNGASS 2016 Outcome Document

4- rights	6- cooperation	7- development
(a) (i)	(d)	(h) (i) (j) (k) (l)

145 Migrant Rights Centre Ireland, 2014.

Repression rather than diminishing traffic displaces it and increases its levels of associated violence. For that reason, **policy reforms seem rather the only way to offer labour rights to people involved in *Cannabis* cultivation, processing, or trade** and to put an end to exploitation and compulsory labour.

***Cannabis* has a long historical relationship with travels, travelers, and tourism**[146]. Besides a decrease in *Cannabis*-related tourism conveyed by the progressive implementation of the international drug control Treaties – in particular, the 1961 Convention provision for eliminating all non-medical traditional uses within 25 years[147] – travels motivated by personal, cultural or therapeutic interest in *Cannabis* has persisted. Under the impulsion of the ongoing processes of policy reforms worldwide, this sector is currently experiencing unprecedented opportunities[148] of developing in legal and sustainable settings.

Tourism by itself is already "one of the world's fastest growing industries and is a major source of income for many countries. Being a people-oriented industry, tourism also provides many jobs which have helped revitalise local economies."[149] ***Cannabis* magnifies the development of tourism, particularly in regions where its use or cultivation are traditional.**

Yet, like other forms of development, **uncontrolled or unregulated tourism "can also cause its share of problems, such as social dislocation, loss of cultural heritage, economic dependence and ecological degradation"**[150], and *Cannabis*-related tourism can be a source of added trouble for local populations[151], in particular when clear policy regulations are missing[152].

The importance of *Cannabis* in the choice of a destination for travel is an element that should not be overlooked. Two main elements drive the choice of a destination for travelers interested in *Cannabis*[153]: non-repressive *Cannabis* policies or recent policy normalization processes (like in the Netherlands[154], or in the US states of Washington and Colorado[155], where legal adult use policies have led to a boost in some tourism sectors) or known traditions and culture around the *Cannabis* plant (a "quest for authenticity", valid in Morocco[156], India[157], Jamaica[158], but also California[159], Barcelona[160], etc.).

CARICOM, a multilateral organization grouping 15 Caribbean countries – that all have an important historicity of *Cannabis* – declares that "the region's already **established and developing tourism economy can be**

146 Liechty, 2018; Veverka, 2010.
147 UNODC, 2013. See Article 49, Single Convention on Narcotic Drugs, 1961.
148 Kovacevich, 2018.
149 UNESCO, s.d.
150 ibid.
151 See the case of Cannabis-related tourism in the Dutch "coffeeshops", that challenged policies and led to a re-examination of the authorization of sales of herbal Cannabis to tourists, in BBC, 2011 and Sifaneck et Kaplan, 1995. For the cases of the villages of Malana and Shringa Rishi in India, which restricted access to tourists, afraid of losing local culture's particularities, see Lonelyplanet, 2017 and hillpost.in, 2017.
152 Márquez Daniel, 2016.
153 Belhassen et al., 2007.
154 Amsterdam Tourist Information, 2007(1&2).
155 Kang et al., 2016; and Kang, 2018.
156 Agence France Presse, 2017.
157 Butler, 2017; and Dutta, 2017.
158 Caribbean Council, 2018; and Curated Caribbean, s.n.
159 Meisel, 2017.
160 Pauné and Ferro, 2014.

leveraged further by a cannabis industry located in safe and secure environments. Cannabis can be produced for export as well as for local healing and can be the foundation for a new and vibrant wellness tourism industry"[161]. While noting the "potential for the use of [*Cannabis*] for developing the medical […] and recreational [*Cannabis*] tourism markets" they note that "[all] of these policy decisions will require targeted law reform. For example, the amended Jamaica law 2015 does not fully liberalise the tourist market. Rather, it requires visitors to obtain a special permission to access [*Cannabis*]."[162]

National and local policies that contemplate creating AO[163] for regulated *Cannabis* markets could also take advantage of AO's potential to promote sustainable tourism, increase job creation, community ownership, and promote local cultures, knowledge, and products.

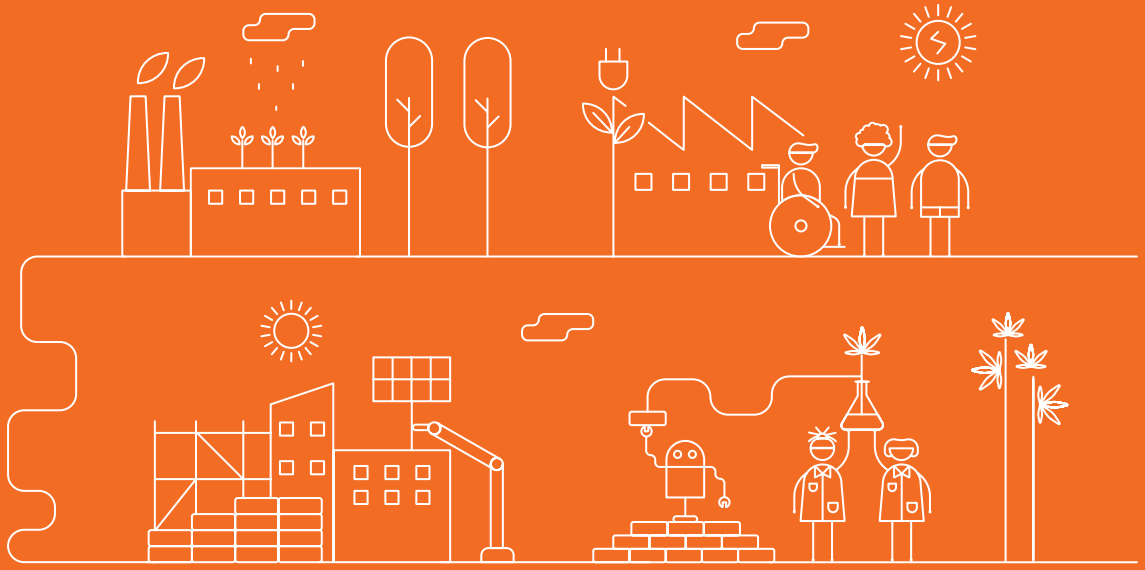
Local communities in traditional areas of cultivation, which by nature are rural and face challenges for economic development and integration, would primarily benefit from such programs of intellectual property protection. The recognition and value added for local products, cultivation practices, and chemovars[164] can meaningfully contribute to meeting target 8.9 by strengthening the competitiveness of a region in the tourism sector, while achieving the broader Sustainable Development Agenda. Indeed, it is already documented for products other than *Cannabis* that AO intellectual property protections – and resultant market recognition of a region – "have enormous assets in relation to the positive repercussions they generate in the economy as a whole (job creation, opportunities in other sectors such as tourism, brake the rural exodus), the protection of environment, gender issues, preservation of traditional knowledge and biodiversity, etc."[165] Finally, the potential for combining agro-tourism, eco-tourism, and therapeutic or health tourism would likely abound in a *Cannabis* producing region with an Appellation of Origin system in place.

Public policy reforms of *Cannabis* should integrate sustainable tourism indicators[166] in the design and monitoring of policy impacts and consider valorizing regions of tradition as potential fuel for tourism and protecting them as a potential target for mass-tourism.

161 CARICOM, 2018, p. 5.
162 ibid., pp. 54-55
163 Stoa, 2017; see also WIPO, s.d.
164 Malsbury, 2016.
165 Office Marocain de la Propriété Industrielle et Commerciale, s.d.
166 Tanguay et al., 2013.

INDUSTRY, INNOVATION AND INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.



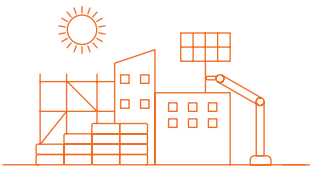
GOAL 9: KEY POINTS & RECOMMENDATIONS

Non psychoactivity-related products of the Cannabis plant have proven to efficiently replace synthetic or petroleum-based materials, being high performance and environmentally-friendly.

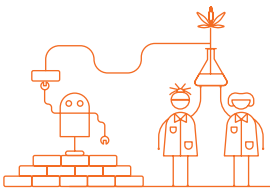
Authorities should foster the use of building materials such as "hempcrete" (Cannabis fiber-made concrete) and seed-pressed oils (used for paints and sealants), and consider using these materials locally to incentivize "kilometre zero" markets for infrastructure construction and rehabilitation.

Biocomposites made of Cannabis fibers (polypropylene, polyethylene, polyester) are resistant, durable, cost-effective, and for these reasons already widely used commercially (for furniture, roofing shingles, bioplastic, cars package trays, automotion door panels, etc). That material is key to building resilient and environment-friendly infrastructures and industries.

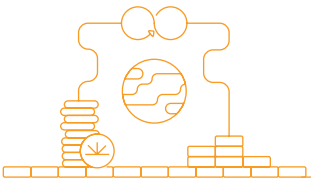
As Cannabis sequesters important quantities of carbon dioxide during its growth, the territorial repartition of these crops can help existing geoengineering strategies to overcome the adverse impacts of climate change and foster climate resilience.



Target 9.4
By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities



Target 9.5
Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.



Target 11.c
Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.

ACCELERATE CLIMATE ACTION FOR ALL SDGs

Accelerate climate action for all Sustainable Development Goals.

Operational Recommendations from the UNGASS 2016 Outcome Document

6- cooperation	7- development
(d)	(h) (i) (j) (k) (l)

As explained under Goal 1 and 2, the so-called "hemp"-type chemovars of *Cannabis* (plants grown for non psychoactivity-related purposes) have multiple derived marketable products. Among these, a series of building materials can be manufactured from the fibers of the stalk of the *Cannabis* plant.

Products of the *Cannabis* plant have proven to efficiently replace synthetic or petroleum-based materials, providing high performance and environmentally-friendly products. Among these, the most notable products that can contribute to upgrading infrastructures and making them sustainable, efficient, and clean are:

- Concrete: *Cannabis* fiber-made concrete ("hempcrete[167]"), a mixture of the plant's hurds and lime used either directly for construction, or insulation purposes. Lime and hurds chemically react and bind the mixture together, which continues to solidify over time, ensuring a strong and resistant material[168].
- Industrial oils: Oil pressed from the seeds of the *Cannabis* plant are ideal to use for manufacturing paints and sealants. Its superior performance – devoid of volatile organic compounds or hazardous air pollutants – provides high protection from the inside out, for wood sealants, in particular.
- Plastic and composites: Biocomposites made with part of *Cannabis* fibers are being developed for a range of products (polypropylene, polyethylene, polyester) allowing interior or exterior uses of the material. Biocomposites containing *Cannabis* fibers are resistant, durable, and cost-effective. The material is already used commercially for products, such as furniture, roofing shingles, or bioplastic for the car industry[169] (in particular, for cars package trays, door panels, window pillars, or luggage racks).
- The carbon sequestration and storage properties of *Cannabis* fiber-based bioplastics and biocomposites through photosynthesis is a remarkable additional advantage of *Cannabis*-based building for infrastructure sustainability[170].

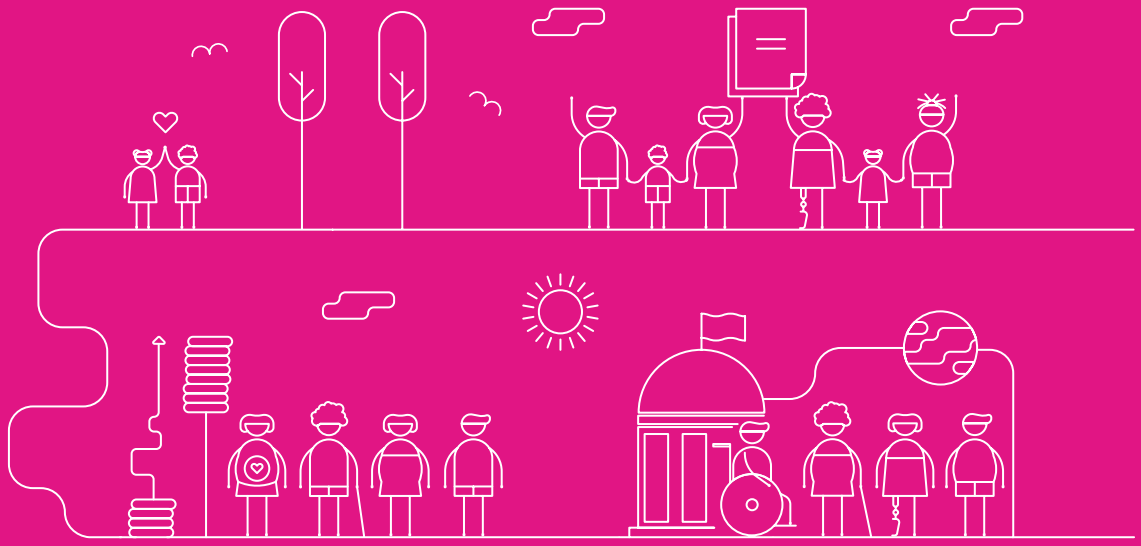
It should be noted that, in addition, the *Cannabis* plant also sequesters carbon dioxide during its growth phase (each kilogram of hemp sequesters about 1.8 to 2 kilograms of carbon dioxide[171]), constituting an excellent geoengineering strategy to overcome the adverse impacts of climate change, foster climate resilience and low greenhouse gas emissions in a manner that does not threaten food production.

Public policies should seek to foster local production and supply of these materials locally to create "kilometre zero" markets for infrastructure construction and rehabilitation materials.

167 Piot et al., 2017.
168 Chaban, 2015.
169 Shahzad, 2012.
170 Pervaiz and Sain, 2002.
171 ibid. and Tarun, 2018.

REDUCED INEQUALITIES

Reduce inequality within and among countries.



GOAL 10: KEY POINTS & RECOMMENDATIONS

Goal 10 will never be met as long as Cannabis and other drug use, possession, and other related activities continue to be judicialized and as long as users, possessors, or other affected people continue to be criminalized, stigmatized, and undermined in their rights.

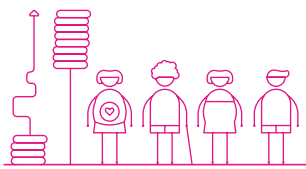
The "drug courts" system that justifies a system of exceptionality, an expeditious justice, and a continued unjustified judicialization, and that reaffirms criminal justice as central in the public policy response to health-related hazards, should be discontinued.

Sustainable Cannabis policies should address equality of opportunities and non-discrimination: not restricting access to legal markets for people with prior drug-related convictions, and addressing barriers to entry into the legally regulated Cannabis industry for communities who have been harmed the most by the prohibitionist policies.

Populations affected by human rights violations should be granted their right to remedy and reparation, through programs for equity and inclusiveness in legally regulated Cannabis markets, and through amnesty and definitive expungement of historically unjust convictions.

Because the overwhelming majority of those accused or convicted for Cannabis-related offences are part of ethnic minorities, migrants, foreign national, asylum seekers or people in irregular situation, indigenous and native populations, socially marginalized people and young people, Cannabis policy reforms need mechanisms targeted at these groups, and needs to monitor the impact of reforms undertaken on these populations.

There is a need to superpose various models of production, supply, and access: Home growing and Cannabis peers clubs (to respect the right to privacy and freedom of association); specific supply for medical access (to leave no one behind); for-profit adult use market. Multimodal regulation is needed, as recreational demand risks overwhelming a monomodal regulation model.

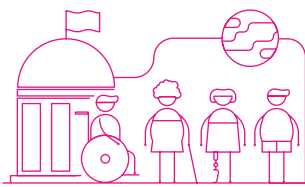


Target 10.1
By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.

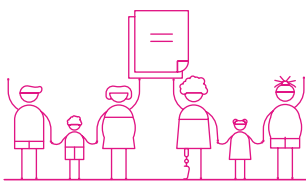
Operational Recommendations from the UNGASS 2016 Outcome Document	
3- supply (b) (d)	4- rights (a) (i)
6- cooperation (d)	7- development (b) (h) (i) (j) (k) (l)

Taking into account the specificities of the *Cannabis* plant, its markets, and its ethnobotany, and integrating the elements stated under Goals 1 to 9 of this report into national *Cannabis* policy reform is necessary to achieve rapid income growth for the poor.

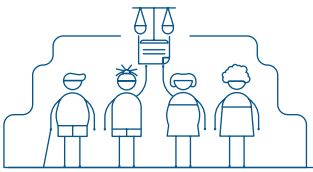
With more complex products and means of production, added burdens of standardisation, compliance, licensing, product testing, packaging, overhead and insurance costs, traditional growers might face difficulties in accessing legally regulated markets – calling for specific protections and accompaniment in the transition. These could rely on the example of Cannabis social club-type models or on intellectual property protections.



Target 10.2
By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.



Target 10.3
Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.



Target 16.b
Promote and enforce non-discriminatory laws and policies for sustainable development.

Operational Recommendations from the UNGASS 2016 Outcome Document		
1- demand (d)	3- supply (b)	4- rights (a) (b) (h) (i)
5- trends (u) (v) (x) (y)	6- cooperation (a) (d)	7- development (h)

As already mentioned, discrimination in policies and practices often disproportionately affect persons arrested or charged for *Cannabis*-related offences and are even more disproportionately concerning women, youth, and minorities. Furthermore, people with a criminal record in relation with "drug offences" – even for low-level, non-violent offenses – or people with a history of incarceration face serious disadvantages when accessing employment, housing, health, safety, and welfare assistance.

In its *Basis for a theory of imputation in criminal law*, Hassemer explains that one of the "characteristics of modern criminal Justice is the exacerbation of the idea of preventive justice" which "makes always more difficult to ensure the principle of equality and equal treatment", citing drug policies as the best representative example[172].

Laws that prohibit and criminalize personal use and possession of *Cannabis* and other plants, products, or substances declared illegal, as well as petty non-violent offences related to *Cannabis* or other drugs, are clearly discriminatory laws. This opinion is shared by 12 United Nations entities (that address the topics of health, Human Rights, AIDS, refugees, migrations, children, alimentation, development, populations, women, labour, education, science, and culture) that made a call to "[review] and [repeal] punitive laws that have been proven to have negative health outcomes and that counter established public health evidence. These include laws that criminalize or otherwise prohibit [...] drug use or possession of drugs for personal use". They recalled that a central principle of the 2030 Agenda for Sustainable Development is to "ensure that no one is left behind" and to "reach the furthest behind first"[173].

The "drug courts" system, a supposed alternative to incarceration that "have been described as being a form of collaboration between criminal justice and public health" which turn out to be a "quasi-compulsory"[174] have

172 Hassemer, 1994 p. 21 (translated by the authors).
173 United Nations, 2018.
174 Rahman and Crofts, 2013.

been actively implemented in recent years all around the world[175]. Yet, drug courts are in fact not than much of an alternative, but rather a reinforcing mechanism of discrimination (in particular against women[176]) that justifies a system of exceptionality, an expeditious justice, and a continued unjustified judicialization of people who use or possess *Cannabis* or other drugs for their own use, reaffirming criminal Justice as central in the public policy response to health-related hazards of controlled drugs[177].

Goal 10 will never be met as long as *Cannabis* and other drug use, possession, and other related activities continue to be judicialized and as long as users, possessors, or other affected people continue to be criminalized, stigmatized, and undermined in their right to privacy[178].

A post-prohibition rooted in human rights.

Recently, three different Supreme judicial Courts in three different continent (Mexico[179], Georgia[180] and South Africa[181]) recognized that the right to privacy and the right to the free development of the personality are violated by laws that prohibit the possession, use or cultivation of *Cannabis* for personal use by adults.

Reforming these public policies – backed by the international drug control Treaty system – and ending these practices is urgent to scale-up the rights and inclusion of the populations left to illicit *Cannabis* markets, and offer them the possibility to positively participate in the prosperity and development of their societies, enabling them the right to access healthcare and treatment, ownership over land, transport or communication tools, and savings.

Repairing the errors of the prohibition decades.

A review of equity and discriminations in *Cannabis* policies made by the Californian Bureau of Cannabis Control in 2008 identified "common barriers to entry into the cannabis industry including unavailability of real estate within areas eligible for permitting; unavailability of startup capital and banking infrastructure; unavailability of skills training to develop industry-specific knowledge; prior drug-related convictions [...] among affected communities."[182]

Addressing equality of opportunities and non-discrimination means targeting those who have been harmed the most by the prohibitionist policies of the past with specific inclusiveness and equity programs: those populations should have priority in benefiting from legal regulations. Because *Cannabis* policies have been recognized to often violate fundamental rights, **people affected should be granted their right to remedy and reparation** in the case of gross human rights violations[183], which concretely includes the right to cessation

175 e.g. in Australia (Birgden, 2008), France (Mission Interministérielle de Lutte contre les Drogues et les Conduites Addictives, 2015), Pakistan (Rahman and Crofts, 2013), USA (Hennessy and Pallone, 2001), Venezuela (Rosales et al., 2008, p. 57.)
176 Giacomello, 2018.
177 ibid.; and Guzmán Rodríguez, 2012.
178 EMCDDA, 2019.
179 Suprema Corte de Justicia de la Nación, 2018; and Embury-Dennis, 2018.
180 Constitutional Court of Georgia/საქართველოს საკონსტიტუციო სასამართლო, 2018.
181 Constitutional Court of South Africa, 2018(1&2).
182 Bureau of Cannabis Control, 2018.
183 Ghehiouèche and Riboulet-Zemouli, 2018.

and guarantees of non-repetition, the right to an investigation and to truth, and the right to obtain reparation, compensation or rehabilitation[184].

In Canada, the entry in vigor of *Cannabis* adult use legal regulations was accompanied by the announce of steps toward the pardon of non-violent convictions for *Cannabis* possession[185]. In the US jurisdictions that have regulated adult use or decriminalized possession/use, there have been tendencies in both directions: In some States like Oregon[186] or Maryland[187], new policies maintained the human rights violations of previous policies, and added infringement to the rights of people convicted for past *Cannabis*-related offences, by negating their right to remedy and reparation (in these States, people with previous conviction for *Cannabis*-related offenses are not allowed to enter the legal industry or work for legal cannabis entities). In other US jurisdictions like Alaska[188] and California[189], however, steps have been taken to grant reparation and rehabilitation to people victims of previous illicit *Cannabis*-related activity, or people imprisoned.

Decision-makers must definitely **take stock of the alleged human right violations** generated by the *Cannabis* policies that they repeal, and continue working on the numerous proposals for equity and inclusiveness in legally regulated *Cannabis* policies[190]. Governments must foster the insertion of affected populations in the legal *Cannabis* market as a solution for post-incarceration reinsertion.

In addition, **systematic State-led human rights violations and historically unjust convictions justify the recourse to retroactive laws or amnesty mechanisms to expunge in a real, permanent and non cancelable way convictions for previously illegal drug offences**.

Eliminating policy-related disproportion of outcomes.

Excepted in rare – and always importantly publicized – exceptions, there are very little key DTO leaders facing criminal Justice or serving condemnatory sentences. To the contrary, a sort of selectivity of the law enforcement and penal systems seem to have tended to disproportionately affect petty, non-violent *Cannabis* law offenders, small-scale sellers, and consumers[191].

184 Droege, 2018.

185 The Canadian government announced in October 2018 and tabled in March 2019 a legislation to speed-up the pardon process for those with a criminal record for minor Cannabis-related offences. However, civil society stakeholders that ask for policies addressing the "500,000 Canadians who have their lives impacted by a criminal record for simple non-violent cannabis possession convictions" (Campaign for Cannabis Amnesty, 2018) note with concern that "while a positive development, pardons do not go far enough" because "a future government could retract pardons for simple possession en masse" because "expungement differs from a pardon in that it treats a conviction as never having been entered, permanently deleting it from criminal justice records" while a pardon "maintains the record of the conviction" (Kates and Hrick, 2018).

186 Oregon Liquor Control Commission, 2014, Section 29(2); Oregon Retailers of Cannabis Association, 2019.

187 Maryland Medical Cannabis Commission, 2015.

188 Alaska House Finance Committee, 2018.

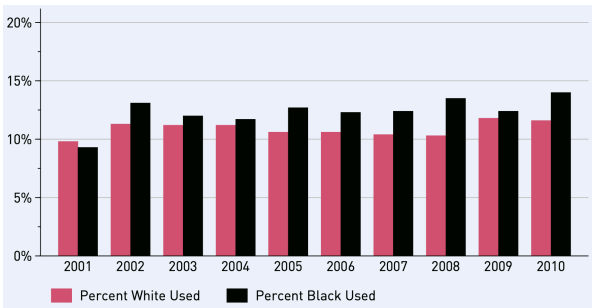
189 State of California, 2018; Center for the Study of Cannabis and Social Policy, s.d.

190 See Bureau of Cannabis Control, 2018. Other important proposals going in the same direction included in the "Cannabis Equity Report" were recommended to the Mayor of San Francisco (City & County of San Francisco, 2017), e.g. to "inform eligibility criteria with data, set tiered eligibility criteria to allow most affected groups to receive higher-value benefits, while extending some benefits to a wider range of applicants impacted by the War on Drugs", "promote equitable employment opportunities at all cannabis businesses, especially for formerly-incarcerated individuals and those living in neighborhoods impacted by the War on Drugs" and "hold streamlined expungement events for citizens convicted of eligible cannabis offenses."

191 In Latin America, WOLA & TNI, 2011 (p. 6) note that "most of the persons in prison for drug offenses are there for minor offenses, yet are serving disproportionately long sentences."

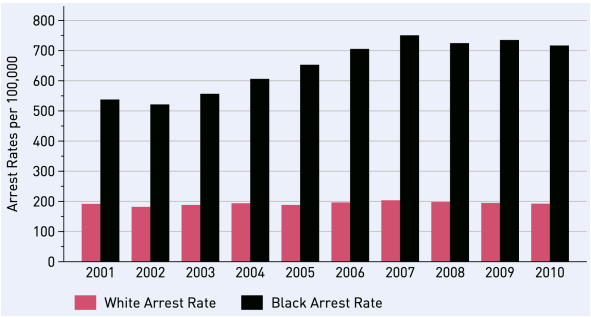
In addition, the overwhelming majority of those accused or convicted for *Cannabis* and drug-related offences (trends are similar for all controlled plants, products and substances, and criminal justice does not make any distinction regarding the type of drug, no more than regarding the extent of the defendant's activities in case of petty traffic[192]) turns out to be members of ethnic minorities[193], migrants, foreign national, asylum seekers or people in irregular situation[194], indigenous and native populations[195], socially marginalized people[196] and the youth[197]. ***Cannabis* policy reforms need mechanisms to monitor their impact on these groups of populations.**

Cannabis use by ethnic group, in the past 12 months (2001-2010)[198]



Sources: National Household Survey on Drug Abuse and Health, 2001-2010.

Arrest rates for possession of *Cannabis* by ethnic group (2001-2010)[199]



Source: FBI/Uniform Crime Reporting Program; U.S. Census.

192 According to WOLA & TNI, 2011 (p. 5): "in general the legislation does not distinguish between levels of involvement in the business – treating street sellers and transporters on par with large-scale drug traffickers, and failing to distinguish between violent and nonviolent offenses. Many persons are sentenced to maximum penalties, and many others, even without having committed serious or violent crimes, end up in maximum-security prisons. Nor are distinctions made regarding the particular type of substance or the risk to health it poses when it comes to pursuing, arresting, and prosecuting a person, such that a person selling cannabis may end up with the same sentence as a person selling cocaine."

193 Most documented cases come from North America, where discriminations essentially concern African-American, Latin-American and indigenous populations (See for the USA: ACLU, 2013; Drug Policy Alliance, 2015; Harris et al., 2009; Levy-Pounds, 2009; McElrath et al., 2016; Wacquant, 2010; and forCanada: Rankin and Contenta, 2017)

194 Nafstad, 2019, p. 8.

195 Weatherburn et al., 2003; and Villaveces Izquierdo, 2008.

196 Díaz Velásquez et al., 2016.

197 Brusco, 2016; Cano Menoni, 2014; and Saintout, 2014.

198 Extracted from ACLU, 2013, p. 66.

199 ibid., p. 48.

Leaving no-one behind, transitioning without social divide.

In parallel with the illicit market, and partly as an answer to its risks and harms (adulteration of products, violence or unsafe settings, threats of penal consequences, price, etc.) people who use *Cannabis* have found an original but ancient method of supply: home cultivation.

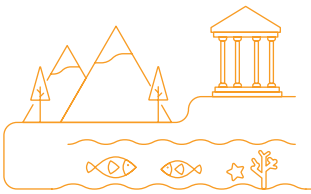
In some cities (like in Spain, Belgium or Uruguay[200]), the obstacles to self cultivation in urban and peri-urban areas led home growers to join and create non-for-profit entities – organized as insular societies, but respecting local laws on non-profit entities – behind which the activities of shared cultivation were undertaken[201], protected by the freedom of association[202]. Called "*Cannabis* social clubs[203]" these peer-led non-for-profit operations are described like "an innovative and original human-scale model for *cannabis* regulation[204]" where the limited profits generated by limited scope and mandatory membership impedes the entities from becoming too-large operations. Rarely overpassing a couple of hundred members, *Cannabis* social clubs redirect their profits to the costs of production, rent, insurance, commodities, and wages for people in charge of cultivation[205].

While *Cannabis* policy reform is often seen as a choice between different options, incompatibles one with the other[206], it is not only possible to **superpose various models[207] of production, supply, and access: it is absolutely necessary.** In properly-regulated policy landscape, home growing and *Cannabis* peers clubs should be allowed, to respect the right to privacy and freedom of association of people. Specific supply models for medical uses should be sought, in parallel of a needed for-profit adult use market, without which all other options risk being overwhelmed by covered up recreational demand

200 Pardal et al., 2018.
201 Jansseune et al., 2019.
202 Marks, 2019 pp. 6-7.
203 ENCOD, 2011.
204 Ghehioueche and Riboulet-Zemouli, 2016.
205 Decorte, 2016.
206 Caulkins et al., 2015.
207 See for example the legal regulations enforced in Uruguay (Instituto de Regulación y Control del Cannabis, 2019; and Martínez, 2016) where several ways of production (home growing, peer clubs and licenced crops) and access (clubs, pharmacies) have been successfully implemented.

SUSTAINABLE CITIES AND COMMUNITIES

Make cities and human settlements inclusive, safe, resilient and sustainable.



Target 11.4
Strengthen efforts to protect and safeguard the world's cultural and natural heritage.

Target 11.a
Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning.

Operational Recommendations from the UNGASS 2016 Outcome Document

3- supply (b) (d)	4- rights (a) (d) (i)
6- cooperation (a)	7- development (h) (i) (j) (k) (l)

The legal production and distribution of *Cannabis* provides the opportunity to implement public policies that promote employment throughout the production and distribution chains at the local level prioritizing individuals with a past record of non-violent *Cannabis*-related offences. Promoting integration, inclusion, drawing on local knowledge and expertise. Regulating existing crops can result in increased income for the area[208], leading to greater regional development.

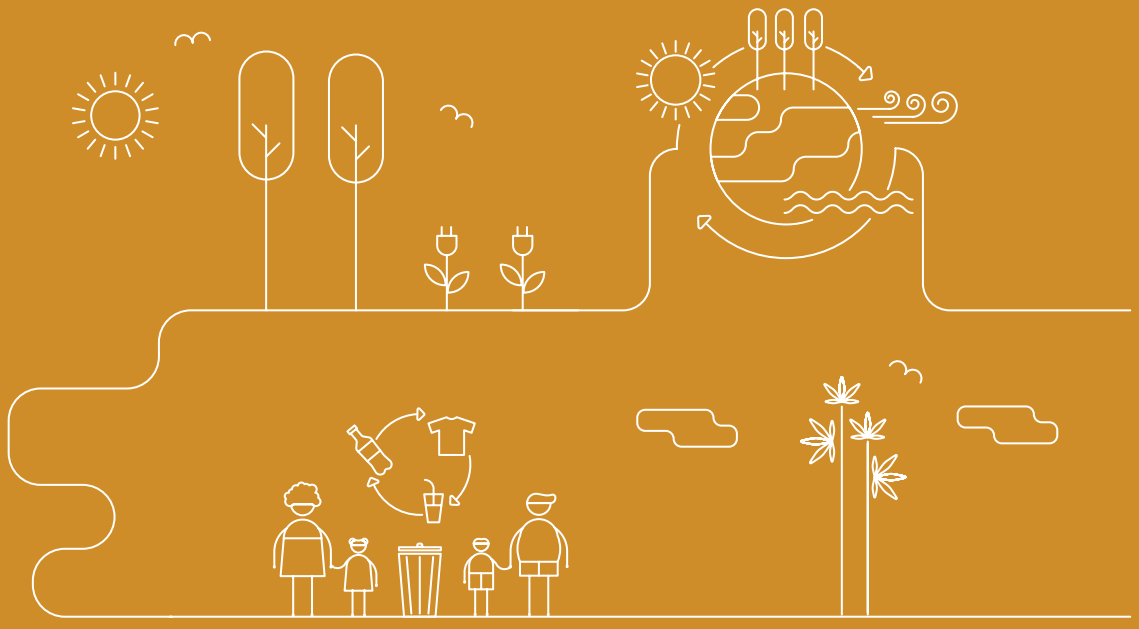
The late development under prohibition of **small-scale *Cannabis* farmers in countries with the strongest largest demand**, particularly in peri-urban and rural areas, should also be seen **as a way to establish sustainable links between cities and suburban settlements**, and could facilitate community empowerment with practical models of ethnosphere preservation and sustainable agricultural practices, which could include the production of fiber, seed, and their derivatives.

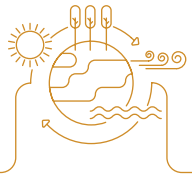
208 McSweeney et al., 2017.

Incentives for locally-oriented *Cannabis* markets that empower communities, as described under the previous Goals, are key for the protection of the cultural and natural heritage of traditional rural *Cannabis*-producing regions. Reforming *Cannabis* policies in tandem with the development of AO or geographical indicators for *Cannabis* products have the potential to provide legal support and protection of intellectual property, which includes elements of both cultural and natural heritage. TK and cultural practices related to *Cannabis* cultivation and medicinal preparations and practices would fall under these protections as would genetic materials (chemovars which have been developed and bred by local communities with unique chemotypic expressions).

RESPONSIBLE CONSUMPTION AND PRODUCTION

Ensure sustainable consumption and production patterns.

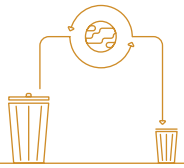




Target 12.2
By 2030, achieve the sustainable management and efficient use of natural resources.

Accelerate climate action for all Sustainable Development Goals.

The alternative that *Cannabis* for non psychoactivity-related purposes represents, for paper, plastic, biofuel, building materials, and clothes, should be taken into consideration while developing strategies to manage and reduce the use of fossil fuel and other non-renewable resources. Furthermore, the benefit of *Cannabis* policy regulation to fight illicit cultivation-led deforestation is yet another element to consider[209].



Target 12.3
By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

Target 12.5
By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

Almost all byproducts and wastes from the *Cannabis* plant can be reused or recycled, and are biodegradable[210].

Developing countries should be supported by the mechanisms of international cooperation for the professional

209 McSweeney et al., 2014; See also Goal 15.
210 See more under Goals 2 and 9.

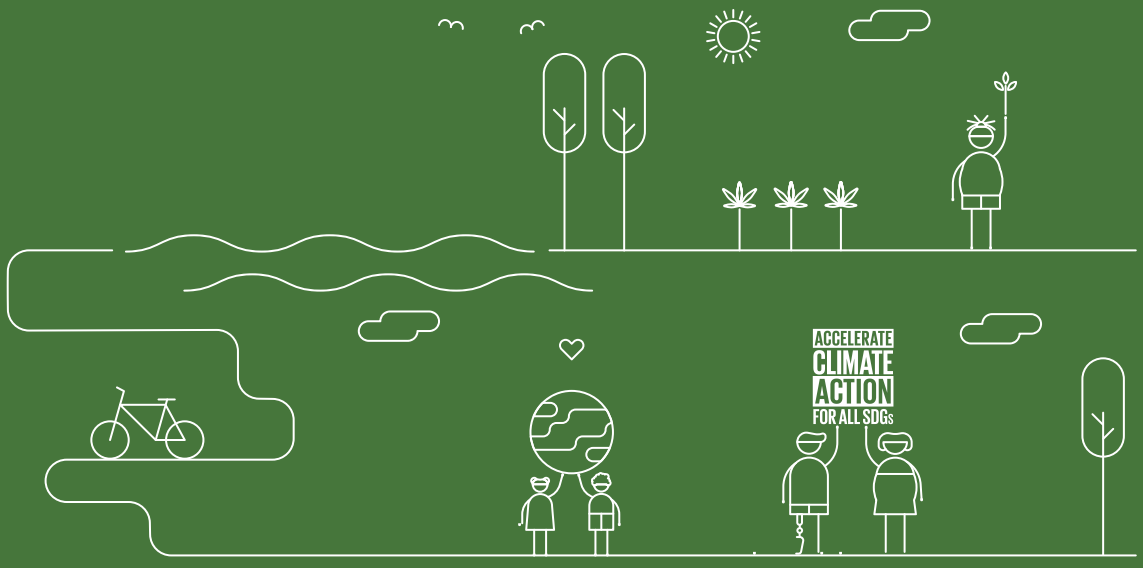
Target 12.a
Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production.

training of social and health care professionals in order to mainstream evidence-based and honest education to *Cannabis* use and related harms, and to orientate people who use *Cannabis* towards an approach of sustainable consumption focused on reducing potential harms and empowering informed *Cannabis* consumer choices[211].

211 See more under Goals 3 and 4.

CLIMATE ACTION

Take urgent action to combat climate change and its impacts



If we do not change course by 2020, we risk missing the point where we can avoid runaway climate change, with disastrous consequences for people and all the natural systems that sustain us" Antonio Guterres, UN Secretary-General[212].

Although there is no specific target of Goal 13 to which *Cannabis* directly relates, this report refers to that plant and its policies as an important lever for climate action in the context of Sustainable Development Goals 1, 2, 7, 8, 9, 11, 12, 15 and 17. If the plant fails to fit the SDG Targets, it answers the call to *accelerate climate action for all Goals*, and answer the Sustainable Development Agenda's mandate "to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations."[213]

A working ethnobotanical relationship with *Cannabis sativa* is necessary to build green and resilient societies. Many findings presented in this report show that the *Cannabis* plant and sustainable policy reforms provide a toolkit to help mitigating climate change, and tackling its effects.

Cannabis and its policies might not be at the core of multilateral action on climate change, yet they are an influencing factor on multiple climate and climate change outcomes, either positively in the case of the plant's potential (e.g., uses of the plant for the numerous non psychoactivity-related purposes, soil phytoremediation...) or negatively in the case of failed policies (e.g., deforestation caused by illicit crops driven by DTOs, indoor cultivation...).

Cannabis and its policies might not save the world. Yet they deserve to play a role in transforming our planet and its inhabitants.

212 UNSG, 2018.
213 UNGA, 2015.

LIFE ON LAND

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

GOAL 15: KEY POINTS & RECOMMENDATIONS

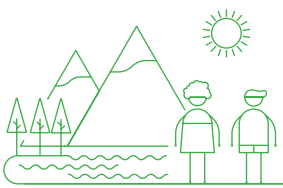
While it is unlikely that drug trafficking organizations include environmental outputs in their strategies, legal standards and regulations must lay the framework for legal farmers to do so.

Standards-based regulated geographic indication systems and Appellations of Origin support best practices and environmental protections, market viability of small-scale craft production, rural economic development and environmental health, among others. They should be considered a primary tool with which to navigate the sustainable and global expansion of regulated *Cannabis* crops in rural areas.

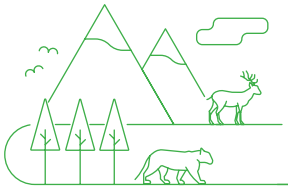
Cannabis is best planted with a wide range of other plants, which fosters biodiversity and enhances flowering *Cannabis* to become a source of pollen for foraging bees. Agricultural policies and programs should encourage crop diversification not only within the genus *Cannabis*, but also with other crops.

Research and development on the potential of *Cannabis* crops in phytoremediation and phytoextraction for contaminated land and water should be encouraged.

Specific provisions in international legal instruments on intellectual property might be necessary in order to provide effective protection of *Cannabis*-related traditional knowledge, traditional cultural expressions and genetic resources.



Target 15.1
By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.



Target 15.4
By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.

ACCELERATE CLIMATE ACTION FOR ALL SDGs

Accelerate climate action for all Sustainable Development Goals.

Operational Recommendations from the UNGASS 2016 Outcome Document		
3- supply (a) (d)	4- rights (a) (i)	6- cooperation (d)

The necessity for *Cannabis* growers to hide their crops from the scrutiny of authorities has resulted in a dispersion (and thus expansion) of illegal cultivation in hidden areas previously preserved from human footprint. In Morocco, clearing of forests for illegal *Cannabis* cultivation and cutting for firewood accounted for almost 90% of the deforestation[214]. In the USA, significant areas of protected national parks have been taken over by DTOs to cultivate *Cannabis*[215]. According to the *Alternative World Drug Report*[216], in Mexico's Sierra Madre Occidental region, "one of the most prolific opium and cannabis producing regions in the world", the "displacement of drug producers to this area has fuelled widespread deforestation, jeopardising the 200 species of oak tree and the habitats of numerous rare bird species – such as the thick-billed parrot – found in the region. Such deforestation is not limited to the area cultivated for illicit crops. Rather, in addition to this

214 Grovel, 1996; and UNODC, 2003.
215 Wood, 2003.
216 Rolles et al., 2016, p. 136.

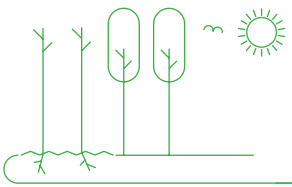
land, drug producers also clear forest for subsistence crops, cattle pastures, housing, transport routes and in some cases, for airstrips. As a result of this, several acres of forest are often clearcut to produce just one acre of drug crop."

Enforcement-led approaches to *Cannabis* control pretended to minimize the ecological damage that illegal cultivation causes to the environment. Yet, they have rather "magnified these harms, transferring environmental costs to ever more remote, ecologically sensitive areas".

It is indeed unlikely that DTOs would include environmental outputs in their strategies. Only legal rules and regulations can lay the framework for legal farmers to do so. "Left in the hands of unscrupulous criminals, drug production will continue to be conducted covertly, leading to the dangerous disposal of chemical waste, and damage to sensitive and important ecosystems."[217]

Standards-based regulated geographic indication systems and AOs support best practices and environmental protections, market viability of small-scale craft production, rural economic development, environmental health, community identity, and other regionally stabilizing benefits pertinent to the Sustainable Development Agenda. Given the widespread establishment of pre-regulatory producing regions of *Cannabis* for both psychoactivity and non psychoactivity-related purposes throughout the world, and AOs should be considered a primary tool with which to navigate the sustainable and global expansion of regulated *Cannabis* crops in rural areas.

Cannabis is best planted with diverse other companion plants, which enhances biodiversity. Moreover, during time periods with a dearth of pollinator-friendly crop plants in the region, flowering "hemp" becomes a potentially valuable source of pollen for foraging bees[218]. Agricultural policies and programs should encourage crop diversification not only within the genus *Cannabis*, but also with other crops.

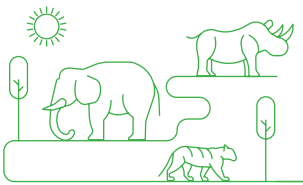


Target 15.3
By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

While the area of arable land contaminated by anthropogenic-derived pollutants continually increases, the potential for the use of *Cannabis* crops in phytoremediation programs for contaminated land is being under close scrutiny by the scientific community[219] for its potential benefits for trace element phytoextraction in contaminated soils and water. Studies have focused on the cultivation of *Cannabis* in heavy metals-

217 ibid. p. 138
218 Colorado State University, s.d.; O'Brien and Arathi, 2019.
219 Ahmad et al., 2015.

contaminated soils[220] for instance for the production of "biodiesel"[221]. In a study comparing *Cannabis* with three other plants, "hemp [...] showed the best phytoextraction potential for [lead]", and there are some mentions that Ukraine's Institute of Bast Crops undertook cultivation of *Cannabis* to remove hazardous contaminants in soils of the Chernobyl area[222].



Target 15.c

Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed.

Perelmuter (2011) relates that seeds have played a central role in agricultural production, for their role in plant reproduction and dissemination – and for their important nutrition intake in the case of *Cannabis* and many other crops. Historically considered as "common goods", "peasant and indigenous communities have freely collected, stored, conserved and exchanged seeds, maintaining a control over them"[223] since the emergence of sedentary agriculture.

Yet the commodification of seeds results in the deprivation of that characteristic of "common good", to the detriment of phyto-genetic diversity. "Technical changes in the seeds that facilitate their appropriation" as well as "transformations in the legal framework of intellectual property that imply a tendency for farmers to become simple lessees of germplasms"[224] are two major threats to fair and equitable sharing of benefits identified by Perelmuter[225].

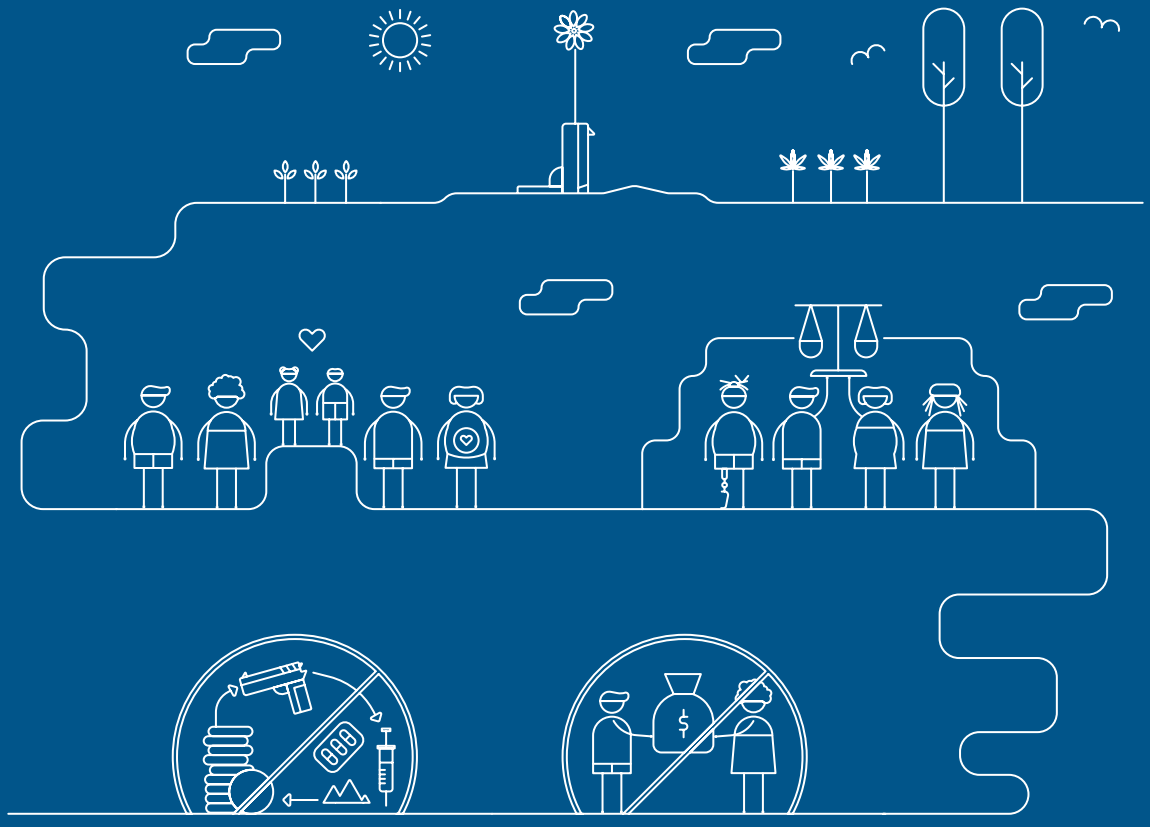
But *Cannabis* makes the case for hope. Duvall[226] analyzes about South Africa that "actions that social movements, especially indigenous and peasants, give around continuing to consider seeds as common goods extends to territories with traditional use of Cannabis" which is key to counter "the overwhelming force of capital in its attempt to appropriate the seeds." Civil society responses to these threats[227], in the form of seed banks, plant genetics catalogues and other initiatives, have created the foundation of a strategy to tackle undue appropriation of *Cannabis*-related natural resources.

220 Linger et al., 2001.
221 Gangrong et al., 2010.
222 Charkowski, 1998.
223 Perelmuter, 2011. Translation by the authors.
224 Ibid., p. 10 "La conversión de las semillas en mercancías."
225 See also Target 2.5 under "Supporting community-based seed banks and initiatives to safeguard genetics."
226 Duvall, 2016.
227 See also Target 2.5.

While legally regulated *Cannabis* cultivation offers communities a way to exit illegal market-related activities, and provides opportunities for them to develop sustainable standards of cultivation and manufacture, the mobilization of civil society's movements will not be sufficient and will need support: ***Cannabis* cultivation should be harmonized within the existing international legal instruments protection and safeguard plants genetic resources, and promoting equitable sharing of benefits arising from natural resources** – including the intellectual property protections such as AO or geographical indications for herbal *Cannabis*, psychoactivity-related derivatives or "hemp" products mentioned earlier. But specific provisions might be necessary to protect populations with historicity in the cultivation of that plant, and in that sense the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of the World Intellectual Property Organization (WIPO) should take action to provide effective protection of TK, traditional cultural expressions and genetic resources related to *Cannabis sativa* L.

PEACE, JUSTICE AND STRONG INSTITUTIONS

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.



GOAL 16: KEY POINTS & RECOMMENDATIONS

Prohibitive *Cannabis* policies have massively undermined economic, social, cultural, civil, political human rights.

Policies must stop criminalizing people who use *Cannabis* products and other drugs, and proportionality must be applied to penal and administrative sanctions.

Cannabis "supply reduction" has been almost exclusively focused on customs, police, or even military operations, fuelling violence among criminal groups and escalating State brutality. Public space and institutions should be demilitarized and public safety forces must urgently be trained to embed Human Rights principles in their daily practice.

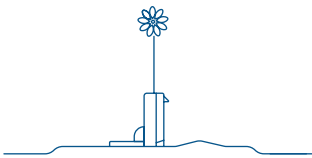
Multilateral support against corruption and impunity.

Developing legal market regulations for the *Cannabis* plant and its derivatives is a way to address the enormous profits of drug trafficking organizations and their capacity of corruption among politicians, public institutions and economic stakeholders.

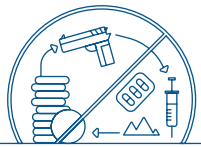
To discourage and discontinue illegal cultivation, small-scale farmers must be offered viable opportunities in the legal economy. Social integration in legally regulated markets of people currently involved in illicit trafficking in *Cannabis* products is key.

Failure of mass media to differentiate between regular adult use and abuse, as well as acknowledging the particularities of religious or medical uses, should be addressed.

Fear, torture, cruel, inhuman or degrading treatments, arbitrary detention, the use of lethal force, and arbitrary executions are all symbols of the failure of governments to address the issues of illicit drug trafficking while respecting the rule of law. These must cease immediately and instead be replaced with a call for legal measures of investigation, truth, justice and if relevant remedy and reparations.



Target 16.1
Significantly reduce all forms of violence and related death rates everywhere.



Target 16.4
By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime.

Target 17.13
Enhance global macroeconomic stability, including through policy coordination and policy coherence.

Operational Recommendations from the UNGASS 2016 Outcome Document

3- supply	4- rights
(a) (b) (d) (e) (g) (i) (j) (k) (l) (m) (o) (p) (q) (r) (s) (t)	(a) (d) (f) (i) (k) (l) (o)

5- rights	6- cooperation	7- cooperation
(p) (r)	(a) (b) (d) (e)	(a) (h) (l)

Since the adoption of the Single Convention in 1961, and even more vigorously since the 1988 Convention setting the stage for the "war on drugs", *Cannabis* "supply reduction" measures have been almost exclusively focused on law enforcement, customs, police, or even military operations, fuelling DTOs violence[228] and multiplying State violence.

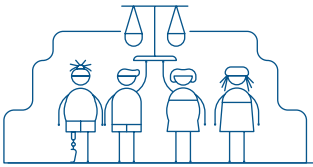
Between 2006 and 2009, Mexico increased its offensive against DTOs in the country[229]. Federal police forces tripled and 45,000 military troops joined the "counter-narcotics" offensive[230]. During this period, violent

228 Felbab-Brown, 2012; and UNODC, 2008.
229 Health Poverty Action, 2015.
230 Keefer and Loayza, 2010.

deaths increased from around 3,000 in 2007 to more than 15,000 in 2010[231]. This data does not only relate to *Cannabis*, but gives an idea of the impact repressive and law enforcement-focused approaches have had on violence and violent deaths, particularly in producing and transit countries. "Countries where the drug trade has been met with a militarized drug policy have often experienced a rise in other crimes, including extortion and kidnapping, which criminal organizations use as additional sources of income"[232].

According to the Organization of American States, "illicit drug production and trafficking may produce what has been called *negative forms of social integration* – relationships of loyalty, reciprocity, and a strong sense of belonging and recognition, but based on crime and violence"[233]. Therefore, **social integration of people currently involved in illicit trafficking in *Cannabis* products is key to decreasing levels of violence** globally.

Nowadays this violent illegal market – much more controlled by DTOs than by the United Nations drug control programme – is estimated by UNODC to be worth "US$320- billion as a conservative estimate, accounting for a minimum of 50% of the value of global illicit financial flows"[234]. Legal regulation of *Cannabis* markets that disrupt DTOs' high profits might be an efficient way to help reduce their capacity for generating violence and other social nuisances.



Target 16.3
Promote the rule of law at the national and international levels and ensure equal access to justice for all.

Operational Recommendations from the UNGASS 2016 Outcome Document		
1- demand (d) (f) (l) (o)	3- supply (a) (b) (c) (d)	4- rights (a) (b) (c) (d) (e) (g) (h) (i) (j) (k) (l) (m) (n) (o)
5- trends (u) (v) (x) (y)	6- cooperation (a) (b) (c) (d) (e)	7- development (a) (h)

231 The Guardian, 2011. Access directly the spreadsheet with governmental data at: docs.google.com/spreadsheets/d/16W7tm-mQMPTt7gZI4yTPvMOrOwY-lXw1H9BgxiGUV75g
232 International Peace Institute, 2018; and Werb et al., 2011.
233 OAS, 2013.
234 Health Poverty Action, 2015; see also UNODC, 2011.

Criminal justice systems that enforce discriminatory laws[235], by nature, undermine fair justice[236] systems and equal rights. Policies on *Cannabis* and other drugs (often similar) that criminalise people who use drugs and related activities, "merely [increase] stigma and marginalisation, acting as a barrier to education, employment, health and social services, and even the right to vote (for example in the United States)"[237].

The UNODC recognized negative consequences of current international drug and *Cannabis* policies[238], among which "the criminalization and marginalization of people who use drugs, often amplified through the use of the criminal justice system to address drug use and minor possession". The UNDP precises that "increasing evidence demonstrates additional harmful effects of drug control policies and related law enforcement practices on development outcomes, particularly [...] governance and the rule of law"[239].

Repealing policies that systematize human rights violations.

In areas of illegal production, traffic, or transit of *Cannabis* products, it has become evident that "social cohesion is eroded when criminal activity becomes more 'normal' as the illegal drug economy spreads, and when violating the rule of law in the implementation of drug control policies also becomes more 'normal'"[240].

The Organization of American States recognized that "in order to discourage illegal cultivation, small-scale farmers must have viable opportunities in the legal economy. Young people in search of a sense of belonging and identity must find hope that they can become contributing members of society. In order for the drug trade not to become a life choice, all citizens should be able to identify with a culture that values human rights, dignity, and equal opportunities – a culture that respects and actively promotes the rule of law"[241].

The illegality of *Cannabis* products artificially inflated their prices – and profits for DTOs – and is often used to finance other illicit activities. Developing market regulations of the *Cannabis* plant and its derivatives is a way to address the enormous profits of DTOs and their capacity for corrupting public institutions and economic agents. *Cannabis* and broader drug control policy reforms are critical to reducing bribery and corruption at all levels and developing transparent and accountable institutions and administrations.

Possession laws are not the only way that legal systems violate human rights and contribute to the violence that accompanies the "War on Drugs"[242]. There are judicial systems in which guilt is assumed for any type of possession (e.g., Singapore, Malaysia, France). In some legal systems, authorities are empowered to detain suspected traffickers for sixty days without even a guarantee of appearing before a court[243]. In many countries, the high number of *Cannabis* and drug-related offences led to establishing systems of immediate

235 Among others, international human rights legal instruments protecting against discrimination include: the Universal Declaration of Human Rights of 1948 (Articles 2 and 7), the International Covenant on Civil and Political Rights of 1966 (Articles 2 (1) and 26), the International Covenant on Economic, Social and Cultural Rights of 1966 (Articles 2(2) and 3), the Convention on the Elimination of All Forms of Discrimination Against Women of 1979 (Article 2) and the Convention on the Rights of the Child of 1989 (Article 2).
236 UNDP 2015. See also Goal 10.
237 GCDP, 2018.
238 UNODC, 2008.
239 UNDP, 2015 p. 12.
240 OAS, 2013.
241 ibid.
242 Deane, 2018.
243 Transform Drug Policy Foundation, 2015.

summons and other sorts of expeditive and summary trials[244] that clearly undermine the right to defense[245] and has a disproportionate impact on foreigners[246].

It has been recognized that many drug-control laws, and their enforcement policies easily deviate to forms of torture and cruel, inhuman or degrading treatments[247], arbitrary detention[248] and even sometimes the use of lethal force, and arbitrary executions[249]. In China for instance, the death penalty is applied routinely in an effort to stop drug trafficking[250]. The laws that sustain the absurd "War on Drugs" are a paradigmatic example of Human Rights violations throughout all levels of the police and justice systems.

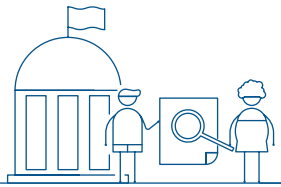
Failure of mass media to differentiate between regular adult use ("recreational consumption") and problematic use ("abuse") in certain cultures has played an important role in the criminalization of the use of *Cannabis* – which can amount to not only human, but also civil, political and cultural rights violations for some populations[251].

In certain religions and rites, so-called "entheogenic plants"[252] are fundamental and have been used traditionally for centuries for religious purposes[253]. The 1961 Single Convention on Narcotic Drugs binded ratifying countries to eliminate traditional religious uses of *Cannabis* within a period of twenty-five years. Yet, this measure clearly contradicts international law[254] on the protection of traditional religious practices, and the rights of indigenous people[255].

In Mexico, complaints to Human Rights agencies for abuses perpetrated by military and police forces have increased about 900% since the 1980s. Mass massacres happen, not only by the hand of DTOs, but also by that of police or military forces in cases related to drug trafficking[256]. Systematic State-led violences are endemic in transit regions[257].

244 Molin and Sayn, 2015.
245 Chevrier, 2018.
246 Léonard, 2010.
247 Human Rights Council, 2013, pp. 9-10; and Transform Drug Policy Foundation, 2015, pp. 5-6.
248 United Nations High Commissioner on Human Rights, 2016.
249 United Nations Special Rapporteurs on summary executions, Christof Heyns, and on torture, Juan E. Méndez, remind (United Nations High Commissioner on Human Rights, 2015) that "Executions for drug crimes amount to a violation of international law and are unlawful killings." See also: United Nations High Commissioner on Human Rights, 2018.
250 Ying, 2012.
251 Barrett, 2018, pp. 10-13.
252 Entheogenic plants are raw botanicals or preparations that induce any type of spiritual experience (See: Evans Schultes and Hofmann, 2001).
253 Tupper and Labate, 2012.
254 Pfeiffer, 2013,
255 International Drug Policy Consortium, 2012, Chapter 4.4.
256 Transform Drug Policy Foundation, 2015.
257 Díaz Velásquez et al., 2016, p. 17.

Target 16.5
Substantially reduce corruption and bribery in all their forms.



Target 16.6
Develop effective, accountable and transparent institutions at all levels.

Operational Recommendations from the UNGASS 2016 Outcome Document		
1- demand (d)	3- supply (a) (b) (d) (e) (g) (i) (j) (k) (l) (m) (o) (p) (q) (r) (s) (t)	4- rights (a) (b) (d) (f) (h) (i) (k) (l) (o)
5- trends (p) (r) (u) (v) (w) (x) (y)	6- cooperation (a) (b) (d) (e)	7- development (a) (h) (l)

The enormous profits[258] and absence of taxation of DTOs has allowed them to easily and systematically "pay off judges, police, politicians, and other officials using their vast drug profits" as in Mexico[259]. "DTOs created a network of corruption that ensured distribution rights, market access, and even official government protection for drug traffickers in exchange for lucrative bribes." Operations of infiltration and monitoring of DTOs are important point of contact with small and medium-level law enforcement and military officers, who are also a central target of DTOs corruption, aside Government officials[260].

One of the most obvious evidence of DTO-governments associations is the **lack of prosecutions (or non-meaningful prosecutions) of high-ranking government officials** corrupted by DTOs, something that is

258 UNODC, 2011.
259 Shirk, 2011.
260 Health Poverty Action, 2015.

documented in all continents (e.g., Afghanistan[261], El Salvador[262], Germany[263], North-Macedonia[264], France[265], Morocco[266], Mexico[267], Nederlands [268], Pakistan[269]...).

Corruption-related money and asset laundering activities go through tax-havens or international financial centres. In this regard, the case of HSBC is significative, and highlights the structural ritualisation and **normalisation of corrupt and unethical behaviour in relation with criminal organizations and corrupted governance, within the banking environment**[270]. Efforts to make banking and finance more transparent should be strengthened to tackle the core of the financial flows and laundering of the money of corruption.

In addition to its inherent damages and destabilization of societies, the corruption generated by the illegal *Cannabis* and controlled drugs markets escalated violence between DTOs and public institutions leading to a degeneration of State security forces into similarly violent practices than those of DTOs. Worse, the legal industrial military complex took part to this escalation (e.g., the case of the Fast & Furious operation[271] the German company Heckler & Koch and its sale of assault weapons that were used in massacre by police and military forces of 43 students from the Mexican village of Ayotzinapa[272]).

Abolishing narcopolitics and necropolitics.

Unregulated markets and their associated profits are a fertile ground, favourable to the development of corruption, in some countries (mainly South-Eastern Asia and Mesoamerica). The corruption linked to DTOs and crops declared illegal, in association with the escalation of violence and the militarization of public space[273], led to the establishment of what can be described as a **necropolitical order**. Series of terms such as "narcopolitics"[274], "necropolitics"[275] or "aporaphobia"[276] have appeared as part of a discursive taxonomy in

261 Marco Gemperle, 2018.
262 Wolf, 2018.
263 Gounev and Ruggiero, 2012.
264 See: European Commission, 2008. The new name has been preferred over "Former Yugoslav Republic of Macedonia" precedently used to designate the country.
265 In France for instance, François Thierrey, head of national drug enforcement administration (OCTRIS), was accused of coordinating the import of dozens of tons of Cannabis resin in Spain and France (Fansten, 2016).
266 According to Bordes and Labrousse (2004), DTOs in Morocco "are at the origin of networks of corruption and clientelism ranging from the choice, by the population, of traffickers as village authorities [...] to the highest levels of the authorities of the State". See also Hibou and Tozy, 2009.
267 Bataillon, 2015; and Chabat, 2005.
268 Gounev and Ruggiero, 2012.
269 Suba Chandran, 1998.
270 See: Ahmad Naheem, 2016; Carlin and Eshwar Lokanan, 2018. The case has an historical relevance, as HSBC was founded a century ago in the context of the post-opium wars in Asia, that also originated the first ever international drug control treaties (Toussaint, 2014).
271 See the the "Fast & Furious" case, an operation or the German company Heckler & Koch linked to a sale of assault weapons to Central-American DTOs (in Eby, 2013; Fisher, 2013; Pérez Ricart, 2013; and Turbiville Jr, 2011).
272 Deutsche Welle, 2014; Pérez Ricart, 2013; and Strobel, 2014.
273 International Peace Institute, 2018; and Werb et al., 2011.
274 Narcopolitics are defined as "a mode of political practice that works to rationalize governance in terms of the problems associated with illicit drugs" by Garriott in Raikhel, 2011, on the basis of Foucault, 1976. See also Wright, 2011.
275 Necropolitics necropower are defined as "the various ways in which, in our contemporary world, weapons are deployed in the interest of maximum destruction of persons and the creation of death-worlds, new and unique forms of social existence in which vast populations are subjected to conditions of life conferring upon them the status of living dead" by Mbembe, 2003. See also Flacks, 2018; and Wright, 2011.
276 Aporaphobia is defined as "a strong antipathy, aversion or hatred toward poverty or poor people" in Cortina, 1997. See also Sandoval,

social sciences that seek to make visible the complexity of modern criminal organizations, corruption, politics and their relation to power, once certain unprecedented levels of violence and constraint has been reached. The "abandonment of important social sectors, the impoverishment, **the corruption and the inability of governments to provide security, have generated enormous spaces of para-legality**"[277]. The extreme hierarchization of DTOs' work structures, resulting from prohibition-induced lack of regulation in business practices, has resulted in a modification of social perceptions[278], and ultimately in profound economic, socio-political and symbolic power disparities in the regions most affected by harsh repressive prohibition policies [279].

DTOs criminal activity also play an important role in **generating social contexts that benefit narcopolitical or necropolitical strategies**: on the one hand, they represent a considerable part of most countries' GDP, on the other hand the fear instilled among civilian population can benefit authorities relying on the effectiveness of that fear to table controversial laws undertake special extrajudicial operations or declare the state of exception/ emergency (e.g., Mexico, Philippines, Brazil)[280]. The indirect contextual support that DTOs provide to corrupt governments allow to justify **policies of exceptionality and increased Human Rights violations, as well as the normalization of invasive authoritarian and surveillance measures**[281].

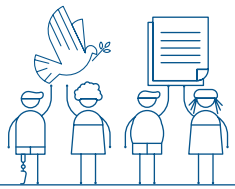
The most infamous examples are in Asia (Philippines: more than 20,000 government-motivated extrajudicial killings of people alleged to be related to drugs – including *Cannabis*[282] – were reported during the last three years[283]; Bangladesh: almost 500 alleged extrajudicial murders, motivated by the government, in a six months period[284]), and in Latin America (Mexico: about 35,000 people were reported to be killed in relation with illicit drug trade, in four years[285]).

Techniques of extreme violence (e.g. kidnapping, sale of human organs, torture, murder on demand, sexual violences, etc.) echoed by similarly violent, disproportionate, dignity-violating law enforcement interventions, legitimate the terminology of narco- and necropolitics[286]. However, because of the economic strength and social implantation of DTOs, planning effective strategies to fight against them might bring as a consequence "recessive effects in the economy as a whole and significant social consequences"[287]. This might explain why neither governants nor military and security forces seek to put an end to the power of these criminal organizations: they rather prefer to limit DTO's power, and eventually use it to their advantage.

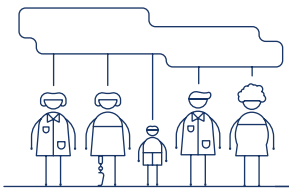
There seem to be only one way to curve violence and severe breach to the rule of law, while preserving the economical development of affected countries: legal regulations of the *Cannabis* market and, when relevant and as appropriate, of other controlled plants, products and substances. Besides this **need to reform criminal**

2004.
277 Castro & Moreno, 2015, p. 86.
278 Arcila Estrada, 2017.
279 Sandoval, 2004, p. 81.
280 Agamben, 2003.
281 Dunn, 2001; and Vagle, 2016.
282 See for instance Balagtas See, 2017; and Gavilan, 2018.
283 Human Rights Watch, 2017; Asian Network of People who Use Drugs, 2019,
284 According to ANPUD (Asian Network of People who Use Drugs, 2019), "Over 27,000 people killed in drug crackdowns in the Philippines since May 2016. In Bangladesh, up to 466 people have been killed since the Prime Minister launched a nationwide anti-drugs campaign in May 2018."
285 The Guardian, 2011.
286 Andreatta, s.d.
287 Resa Nestares, 2003.

justice systems[288] **and provide safe and legal ways for populations to get involved in alternative licit trade**, the creation of international **"truth and justice" commissions to independently investigate and combat impunity and crime** should be sought to contribute to a post-prohibition process that enforces the right to remedy and reparation for victims of gross Human Rights violations and strengthens transparency and the rule of law.



Target 16.10
Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.



Target 17.6
Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.

Target 17.16
Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.

Operational Recommendations from the UNGASS 2016 Outcome Document

4- rights (a)	5- trends (b)	OPERATIVE PARAGRAPH 9

During the period of 1954-2019[289], the WHO's official position was that "there should be an [...] abolition of cannabis from all legitimate medical practice"[290], fundamentally unbiased research related to Cannabis has been scarce. The new policy landscape with recognition from the WHO and an increasing number of jurisdictions allowing medical use has created an unprecedented opportunity for multi-disciplinary research

288 Wodak et al., 2002.
289 Jelsma and Armenta, 2015; and Riboulet-Zemouli, 2019.
290 WHO, 1954.

and is facilitating a renewal of Cannabis and cannabinoid studies. After updating its position the WHO has a mandate to lead and coordinate cooperation on science and knowledge-sharing related to Cannabis to ensure access to information for all.

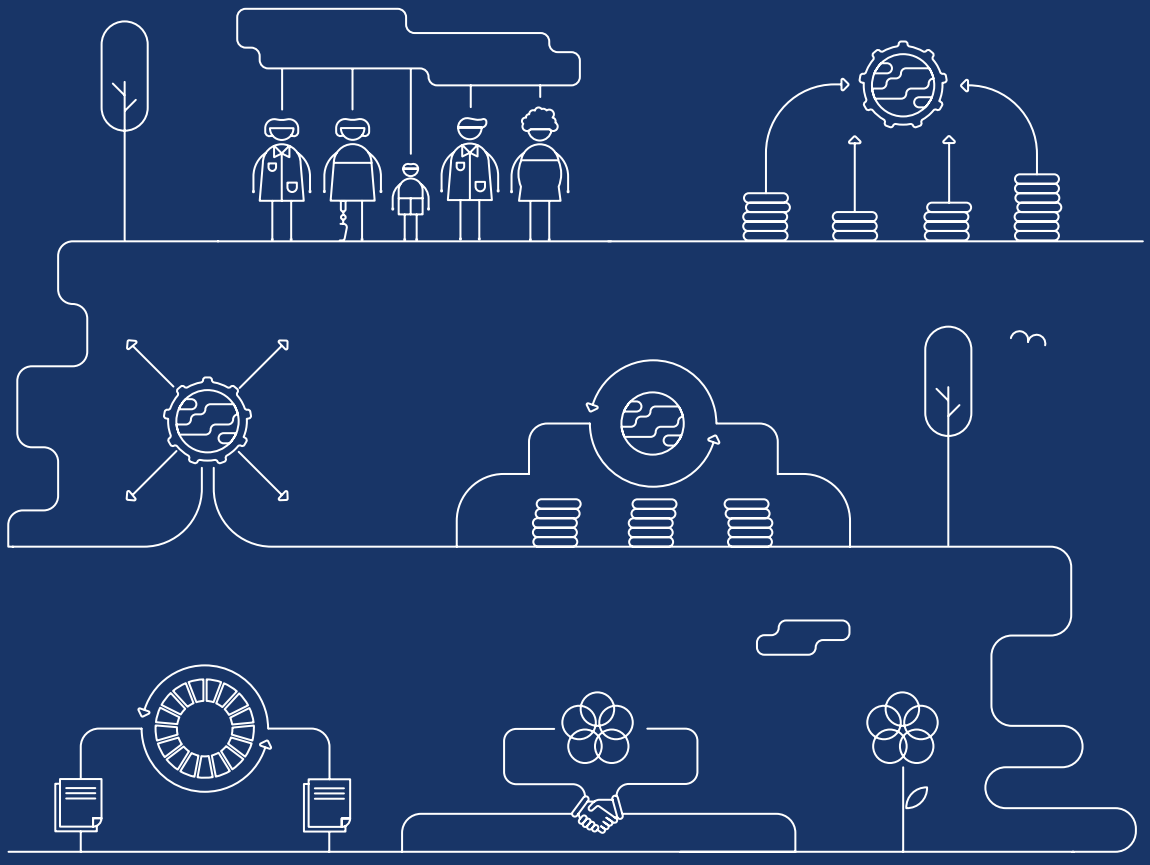
In some countries like France[291], freedom of speech on topics related to drugs is restricted. This constitutes an undeniable barrier to drug-related education, prevention and information for people who use Cannabis as well as social and health workers who cannot work adequately when lacking this information.

Elsewhere, public funds for research have been geared towards studies that focus on the adverse effects or possible negative outcomes of drug and Cannabis use. Research that entailed benefits or non-alarming outcomes were discouraged or unfunded resulting in very few studies of that nature undermining the Right of everyone to share in scientific advancement and its benefits[292], and the Right to enjoy the benefits of scientific progress and its applications[293].

291 Article L3421-4 of the French Public Health Code states that the "favorable presentation" of the use of controlled drugs is punishable by five years imprisonment and a €75,000 fine.
292 UNGA, 1948, Article 27; UNGA, 1969, Article 13; and HRC, 2012.
293 UNGA, 1966, Article 15.

PARTNERSHIPS FOR THE GOALS

Strengthen the means of implementation and revitalize the global partnership for sustainable development.



GOAL 17: KEY POINTS & RECOMMENDATIONS

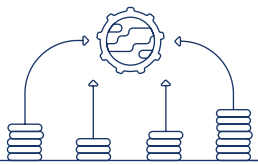
Coherence and consistency of global and national policies and strategies is needed. Rather than maintaining drug policies in a parallel universe with a new post-2019 international plan of action on drugs, the UN Commission on Narcotic Drugs should design drug-control strategies articulated around the Goals of the Sustainable Development Agenda.

Redirecting part of international and domestic government funding of drug control law enforcement towards health and development policies can provide a significant contribution to achieving the Goals of the 2030 Agenda.

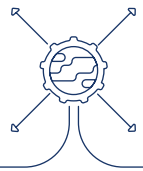
Additionally, sound reforms of Cannabis policies would lead to a redistribution of profits and a mobilization of the resources of criminal organizations to public policy action for sustainable development. The transition of crops from illegal to legal settings, diversification of Cannabis plant-derived products, reuse of waste, etc. will create additional financial resources, including increases in legal exports of Cannabis-related products for the least developed countries.

To cohere, policies should stop hampering human rights and overlapping the mandate of ensuring access and availability of controlled plants, products, or substances for medical and research purposes.

Affected populations, peer groups, NGOs, scholars, the health and social care sector as well as the private sector should be involved at all levels of decision, in particular in the early design of Cannabis-related strategies, policies, laws, and regulations.



Target 17.3
Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.



Target 17.11
Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.

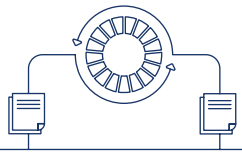
Operational Recommendations from the UNGASS 2016 Outcome Document

6- rights	7- cooperation
(a) (e)	(c) (i) (l)

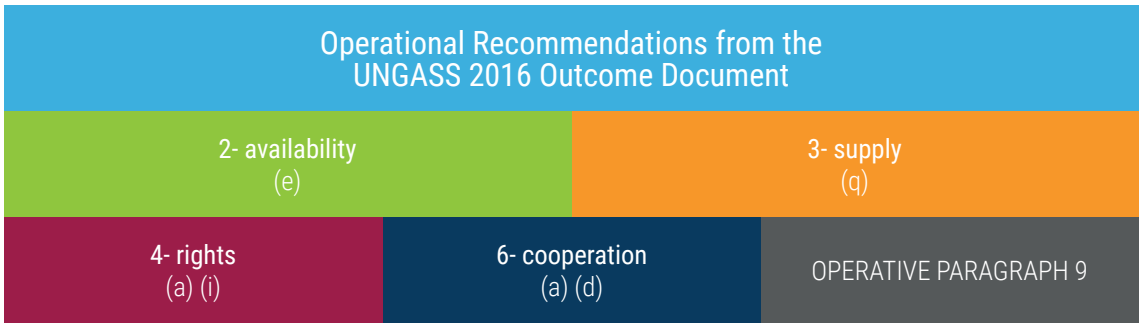
Enforcing **anti-drug policies costs at least US$100- billion a year globally**, rivaling the US$130- billion global aid budget"[294]. Given this extensive gap in funding needed to achieve the SDG targets[295], "diverting a proportion of international and domestic government funding currently reserved for drug law enforcement towards development could provide a significant contribution to achieving the SDGs. Any **reallocation of funding** would also have a double-positive effect on achieving the SDGs, by reducing funding for drug policies which are counter-productive to meeting the Goals."[296]

In complement (as discussed under Goal 16.4 and target 17.13) **sound reforms of *Cannabis* policies would lead to a redistribution of profits and a mobilization of DTO's resources towards public policy action** for sustainable development. The transition of crops from illegal to legal settings, diversification of *Cannabis* plant-derived products, reuse of waste, as well as suggested tools such as geographical and origin protections are ways to create **added value and additional financial resources** (leading to **increasing legal exports of *Cannabis*-related products**) from some of the least developed and most peripheral countries.

294 Martin, 2014.
295 Greenhill et al., 2013.
296 Health Poverty Action, 2015.



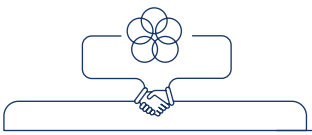
Target 17.14
Enhance policy coherence for sustainable development.


Operational Recommendations from the UNGASS 2016 Outcome Document
2- availability (e)
3- supply (q)
4- rights (a) (i)
6- cooperation (a) (d)
OPERATIVE PARAGRAPH 9

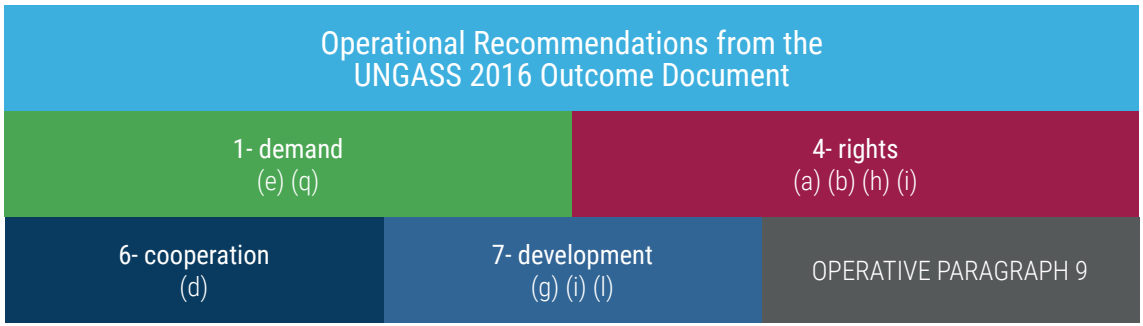
The effect of the international drug control system has always been in stark contradiction to basic Human Rights standards. But since the decade of the 1990's[297] the international community has set a series of targets that are not only in contradiction with many other treaties, agreements and national policies[298] but also contradict some provisions of the drug control Treaties. **International policies and strategies on drugs have overlapped the goal of ensuring access and availability of controlled plants, products, or substances for medical and research purposes.**

Drug-related topics, *Cannabis* in particular, are victims of **incoherences and inconsistencies in international policies and strategies**. Rather than creating a new international plan of action on drugs (and maintaining drug policies in a parallel universe compared to United Nations values, missions, strategies, and programme of work), the UN Commission on Narcotic Drugs should **design drug-control strategies in alignment with the Goals of the Sustainable Development Agenda as a plan of action**. Similar steps could be taken at the local, national, and regional level, thus meeting the commitment made by the UN to ensure that all future policies are aligned with the Sustainable Development framework[299].

297 Jelsma and Armenta, 2015, p. 8. See also UNGA, 1998.
298 Van Kempen and Fedorova, 2016; Lines, 2016; See also about the hierarchy of norms between international human rights legal instruments and drug control treaties in the video of the conference "Is it legal to regulate drugs? Hierarchy of norms between Human Rights & Drug control" from Legal Regulations Fora, Vienna (2017): youtu.be/ujalZSUv7k0
299 UNGA, 2014.



Target 17.17
Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.



The political abandonment of populations affected by prohibition has helped gather some affected persons and **peer groups** and some **have created policy model proposals** such as the Cannabis social clubs[300] that seek consensus with authorities to establish a small-scale non-for-profit psychoactive *Cannabis* products retail system in order to secure their right to privacy. They have successfully been incorporated into public policies (e.g. Uruguay and at the local level in Spain[301]) demonstrating an **efficient result-oriented integration of grassroots initiatives into public policy**.

Involvement of peers and people who use drug in prevention and education campaigns at all stages, is also a key element of the needed government-citizen collaborations to be sought.

Civil society (including affected populations, peer groups, non-governmental organizations, scholars, health and social care sector as well as the private sector, etc.) should be **involved at all levels of decision** – in particular in the **early design of *Cannabis*-related strategies, policies, laws, and regulations**.

300 Decorte, 2016; ENCOD, 2011; Ghehioueche and Riboulet-Zemouli, 2016; Jansseune et al., 2019; Marks, 2019; and Pardal et al, 2018.
301 Marks, 2019.

Acronyms & definitions.

AIDS	Acquired Immune Deficiency Syndrome
AD	Alternative Development
ADHD	Attention Deficit Hyperactivity Disorder
AO	Appellations of Origin
Cannabis	All varieties, sub-varieties and cultivars of the *Cannabis sativa* L. plant
CARICOM	Caribbean Community
CBD	Cannabidiol
CIA	Central Intelligence Agency (of the United States of America)
CNCP	Chronic Non Cancer Pain
CND	Commission on Narcotic Drugs
Δ^9-THC	Delta-9-tetrahydrocannabinol
DTOs	Drug Trafficking Organizations
ECOSOC	Economic and Social Council of the United Nations
ECS	Endocannabinoid System
EMCDDA	European Monitoring Center on Drugs and Drug Addiction
EU	European Union
FAO	United Nations Food and Agriculture Organization
FDA	Food and Drugs Administration (of the United States of America)
GCDP	Global Commission on Drug Policy
GDP	Gross Domestic Product
GIZ	German Organization for International Cooperation
Herbal *Cannabis*	The dried parthenocarpic fruits or flowers of female *Cannabis* plants
HIV	Human Immunodeficiency Virus
HRC	Human Rights Council
ILO	International Labour Office
INCB	International Narcotics Control Board
INFMP	Institute of Natural Fibres and Medicinal Plants
NCDs	Non-Communicable Diseases
OAS	Organization of American States

OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the UN High Commissioner on Human Rights
OST	Opioid Substitution Therapy
Single Convention	Single Convention on narcotic drugs, as amended in 1972
SDGs	Sustainable Development Goals
T&CM	Traditional & Complementary Medicine
THC	Delta-9-tetrahydrocannabinol
TK	Traditional Knowledge
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme
UNGA	United Nations General Assembly
UNGASS	United Nations General Assembly Special Session
UNODC	United Nations Office on Drugs and Crime
UNSG	United Nations Secretary-General
WDR	World Drug Report
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WOLA	Washington Office on Latin America

References.

Agamben G (2003), "Stato di eccezione. Homo sacer, II - 1." Bollati Boringhieri, Torino, 2003.

Agence France Presse (2017), "Au Maroc, les routes touristiques du cannabis" in Jeune Afrique, 2017. jeuneafrique.com/498972/societe/au-maroc-les-routes-touristiques-du-cannabis

Ahmad Naheem M (2016), "Risk of money laundering in the US: HSBC case study", Journal of Money Laundering Control, Vol. 19 Issue: 3, pp.225-237, doi.org/10.1108/JMLC-01-2015-0003

Ahmad R, Tehsin Z, Tanvir Malik S, Asad S A, Shahzad M, Bilal M, Maroof Shah M, Ali Khan S (2015), "Phytoremediation Potential of Hemp (*Cannabis sativa* L.): Identification and Characterization of Heavy Metals Responsive Genes" in CLEAN Soil, Air, Water Volume 44, Issue 2. DOI: 10.1002/clen.201500117

Alaska House Finance Committee (2018), "House Bill No. 316: Act relating to the release of certain records of convictions and providing for an effective date. Restrict Access Marijuana Crime Records" legiscan.com/AK/text/HB316/id/1781755/Alaska-2017-HB316-Comm_Sub.pdf

Alimi D (2018), "Drogues et développement : vers de nouvelles perspectives ?" OFDT, 2018 ofdt.fr/BDD/publications/docs/efdxday6.pdf

Amaducci S et al. (2017), Final Report Summary - MULTIHEMP (Multipurpose hemp for industrial bioproducts and biomass). Università Cattolica del Sacro Cuore. cordis.europa.eu/result/rcn/204421_en.html

American Civil Liberties Union (2013), "The War on Marijuana in Black and White. Billions of dollars wasted on racially biased arrests" ACLU Foundation, New-York, 2013. aclu.org/sites/default/files/field_document/1114413-mj-report-rfs-rel1.pdf

American Horticultural Therapy Association (2013), "Definitions and Position Paper, 2013." ahta.org/assets/docs/definitions%20and%20positions%20final%206.17.pdf

Amsterdam Tourist Information (2007), "Why is Amsterdam so tolerant?" City of Amsterdam, 2007. www.os.amsterdam.nl/pdf/2008_factsheets_4a.pdf

Amsterdam Tourist Information (2007), "Are Amsterdam's coffeeshops about to disappear?" City of Amsterdam, 2007. www.webcitation.org/60cYUF8vE

Anastasijevic D (2010), "Getting Better? A Map of Organized Crime in the Western Balkans." in Benedek W., Daase C., Dimitrijević V., van Duyne P. (eds) Transnational Terrorism, Organized Crime and Peace-Building. Palgrave Macmillan, London link.springer.com/chapter/10.1057/9780230281479_9

Andreatta M (s.d.), "Subjetividad Profesional En El Campo Necropolítico" in "X Jornada de Investigación, Docencia, Extensión y Ejercicio Profesional (JIDEEP) - Neoconservadurismo, políticas neoliberales y erosión de derechos: discursos y prácticas en conflicto." Centro de Investigación en Campos de Intervenciones en Trabajo Social. Fac. de Ciencias Políticas y RR. II. UNR. Argentina. sedici.unlp.edu.ar/bitstream/handle/10915/64312/Documento_completo._GT17.pdf-PDFA.pdf

Anthony J C, Warner L and Kessler R (1994), "Comparative epidemiology of dependence on tobacco, alcohol, controlled substances and inhalants: basic findings from the National Comorbidity Survey." Exp and Clin Psychopharm. 2(3): 244–68.

Anthony J C (2006), "The epidemiology of cannabis dependence." In: Roffman RA, Stephens RS, editors. Cannabis dependence: its nature, consequences and treatment. Cambridge University Press: 58–105.

Arcila Estrada D A (2017), "Construcción Y Reconstrucción De Un Cuerpo Educado Para La Guerra" Universidad de Manizales, Caldas, Colombia, 2017. repository.cinde.org.co/bitstream/handle/20.500.11907/2316/Diego%20Andrés%20Arcila.pdf

Arc View Group (2018), "Legal Marijuana Markets Projected to Reach $23.4 Billion, Employ Nearly a Half-Million Americans by 2022; Effective End of Federal Prohibition is in Sight." in Global news wire, 2018. globenewswire.com/news-release/2018/06/28/1531033/0/en/NEW-REPORT-Legal-Marijuana-Markets-Projected-to-Reach-23-4-Billion-Employ-Nearly-a-Half-Million-Americans-by-2022-Effective-End-of-Federal-Prohibition-is-in-Sight.html

Arnold J (2018), "WHO Expert Committee on Drug Dependence 41st meeting, Critical Review, Cannabis and cannabis resin - Section 3: Toxicology." WHO, 2018. who.int/medicines/access/controlled-substances/Cannabis-and-cannabis-resin.pdf

Asbridge M, Hayden J A, Cartwright J L (2012), "Acute cannabis consumption and motor vehicle collision risk : systematic review of observational studies and meta-analysis." BMJ. 2012; 344: e536.

Asian Network of People who Use Drugs (2019), "Media Release: Another Decade Of Brutality And Futility In Asia's War On Drugs. New report highlights ever-growing Asian drug markets despite draconian attempts to become 'drug-free'" www.anpud.org/another-decade-of-brutality-and-futility-in-asias-war-on-drugs/

Balagtas See A (2017), "Drug war sends OFW rushing home for son who 'couldn't run'" newsinfo.inquirer.net/887697/drug-war-sends-ofw-rushing-home-for-son-who-couldnt-run

Barrett D (2018), "Drug Policy and Human Rights in Europe: Managing tensions, maximising complementarities." Co-operation Group to Combat Drug Abuse and Illicit tracking in Drugs, Council of Europe, January 2018. rm.coe.int/drug-policyandhumanrights-in-europe-eng/1680790e3d

Bataillon G (2015), "Narcotráfico y corrupción: las formas de la violencia en México en el siglo XXI." Nueva Sociedad No 255, enero-febrero de 2015, ISSN: 0251-3552 fileserver.idpc.net/library/Guilles-batallon.pdf

BBC (2011), "Maastricht bans cannabis coffee-shop tourists." bbc.com/news/world-europe-15134669

BBC (2017), "Philippine drug war sees 'bloodiest night' of deaths." bbc.com/news/world-asia-40944888

Belhassen Y, Almeida Santos C, and Uriely N (2007), "Cannabis Usage in Tourism: A Sociological Perspective", Leisure Studies, 26:3, 303-319, DOI: 10.1080/02614360600834958

Bertrand O (2018), "Cannabis au volant : Législation et nos propositions." NORML France, Paris, 2018. norml.fr/droit-legislation/cannabis-et-conduite-automobile-2

Bewley-Taylor D, Blickman T and Jelsma M (2014), "The Rise and Decline of Cannabis Prohibition." Transnational Institute, 2012. www.tni.org/en/publication/the-rise-and-decline-of-cannabis-prohibition

Bhat J A and Taiwo S (2015), "Plant Genetic Resources and Traditional Knowledge in Light of Recent Policy Developments" in "Plant Genetic Resources and Traditional Knowledge for Food Security" (pp.183-198) 10.1007/978-981-10-0060-7_10

Birgden A (2008), "Compulsory Drug Treatment Program for Offenders in Australia: Therapeutic Jurisprudence Implications" Th. Jeff Law Rev 30 (2008):367-90.

Boehnke K F, Litinas E, Clauw D J (2016), "Medical Cannabis Use Is Associated With Decreased Opiate Medication Use in a Retrospective Cross-Sectional Survey of Patients With Chronic Pain." The journal of pain, Volume 17, Issue 6, June 2016, Pages 739-744. sciencedirect.com/science/article/pii/S1526590016005678

Bordes P and Labrousse A (2004), "Économie de la drogue et réseaux de corruption au Maroc." Politique africaine 2004/1 (N° 93), pages 63 à 81 cairn.info/revue-politique-africaine-2004-1-page-63.htm

Bouso J C (s.d), "CBD for treating tobacco addiction?" in Fundación Canna website, fundacion-canna.es/en/cbd-treating-tobacco-addiction

Bradford A C, Bradford W D, Abraham A and Bagwell Adams G (2018), "Association Between US State Medical Cannabis Laws and Opioid Prescribing in the Medicare Part D Population." JAMA Intern Med. 2018 May 1;178(5):667-672. DOI: jamainternmed.2018.0266.

Bramall M (2018), "Cannabis: Regulate it. Tax it. Support the NHS. Promote public health." Health Poverty Action, 2018. healthpovertyaction.org/wp/wp-content/uploads/2018/05/HPA-Cannabis-report-WEB.pdf

Bulman M (2017), "Dark truth behind UK cannabis cultivation revealed as short film exposes exploitation of Vietnamese minors." in The independent, 2017. independent.co.uk/news/uk/home-news/uk-cannabis-cultivation-marijuana-farm-vietnamese-minors-children-short-film-a7999426.html

Bureau of Cannabis Control (2018), "Overview of California Cannabis Equity Programs." bcc.ca.gov/about_us/meetings/materials/20180301_equ_overview.pdf

Butler A (2017), "Famous weed tourism destination in India aims to preserve culture by limiting visitors" in Lonely Planet travel news. lonelyplanet.com/news/2017/07/14/weed-tourism-india-malana-cream

Brotons Albert H (2018), "El Drogotest a Estrasburgo" in Soft Secrets International. softsecrets.com/es/noticias/blog/el-drogotest-a-estrasburgo/

Brusco G R (2016), "Ciudadanía y uso de drogas: Los jóvenes usuarios de drogas como sujetos politicos" Actas de la IX Jornadas de Sociología de la UNLP, 5 al 7 de diciembre de 2016. www.memoria.fahce.unlp.edu.ar/trab_eventos/ev.9160/ev.9160.pdf

Callaway J C (2004), "Hempseed as a nutritional resource: An overview", Euphytica 140: 65. doi.org/10.1007/s10681-004-4811-6

Campaign for Cannabis Amnesty (2018), "Cannabis amnesty advocates respond to Federal Government" cannabisamnesty.ca/_cannabis_amnesty_advocates_respond_to_federal_government

Canadian Drug Policy Coalition (2017), "Cannabis use and driving: Evidence Review." CDPC, 2017. drugpolicy.ca/wp-content/uploads/2017/02/CDPC_Cannabis-and-Driving_Evidence-Review_FINALV2_March27-2017.pdf

Canadian Students for Sensible Drug Policy (2018), "Sensible Cannabis Education: A Toolkit for Educating Youth." cssdp.org/youthtoolkit/

Cannabis Business Times (2018), "State of the Industry Report 2018. Examining the Cannabis Cultivation Market" giecdn.blob.core.windows.net/fileuploads/document/2018/06/06/june%20soi%20layout%20digital.pdf

Cano Menoni A (2014), "Pobres peligrosos. Análisis del proceso de criminalización de la pobreza y la juventud en Uruguay y de los desafíos que representa para la psicología comunitaria." Athenea digital, Vol 14, No 1 (2014): Psicología social y acción pública. raco.cat/index.php/Athenea/article/view/291774

Caribbean Community (2018), "Economic Analysis of the Potential Liberalization of Marijuana Laws in CARICOM: Report Commissioned by CARICOM's Commission on Marijuana." Georgetown, August 3rd, 2018. caricom.org/documents/16434/marijuana_report_final_3_aug_18.pdf

Caribbean Council (2015), "Ganja and the tourism industry" caribbean-council.org/ganja-tourism-industry

Carlin A and Eshwar Lokanan M (2018), "Ritualisation and money laundering in the Swiss banking sector." Journal of Money Laundering Control, Vol. 21 Issue: 1, pp.89-103, doi.org/10.1108/JMLC-04-2017-0013

Caulkins JP, Kilmer B, Kleiman M A R, MacCoun R J, Midgette G, Oglesby P, Liccardo Pacula R, Reuter P H (2015), "Options and Issues Regarding Marijuana Legalization" RAND Corporation, 2015. rand.org/pubs/perspectives/PE149.html

Castilla-La Mancha Medis (2018), "El cáñamo, alternativa a la despoblación en Santa Cruz de los Cáñamos (Ciudad Real)" cmmedia.es/noticias/castilla-la-mancha/el-canamo-alternativa-a-la-despoblacion-en-santa-cruz-de-los-canamos-ciudad-real/

Center for the Study of Cannabis and Social Policy (s.d.), "Cannabis Expungement Around the Country: What People are Saying" cannabisandsocialpolicy.org/policy/cannabis-expungement-the-latest/

Central Intelligence Agency (s.d), World Factbook Archives. www.cia.gov/library/publications/download/index.html

Chaban M A V (2015), "Cannabis Construction: Entrepreneurs Using Hemp for Home-Building." The New-York Times, 2015. nytimes.com/2015/07/07/nyregion/cannabis-construction-entrepreneurs-use-hemp-in-home-building.html

Chabat J (2005), "Narcotráfico Y Estado: El Discreto Encanto De La Corrupción." Letras Libres, 2005. letraslibres.com/sites/default/files/files6/files/pdfs_articulos/pdf_art_10732_8033.pdf

Charkowski E (1998), "Hemp 'Eats' Chernobyl Waste, Offers Hope For Hanford". Central Oregon Green Pages, Winter 1998-99. Archived at: web.archive.org/web/20140110154417/http://www.hemp.net/news/9901/06/hemp_eats_chernobyl_waste.html

Chevrier N (2018), "La comparution immédiate: une procédure à vocation sécuritaire?" Institut de Droit et d'Économie d'Agen. enap.justice.fr/sites/default/files/master2_chevrier.pdf

Chouvy P A (2016), "The supply of hashish to Europe. Background paper commissioned by the EMCDDA for the 2016 EU Drug Markets Report." EMCDDA, Lisbon, 2016.

Cifuentes P (2017), "Si te fumas un porro, no conduzcas en varios días: la DGT te pillará." in El Español, November 5th, 2017. elespanol.com/reportajes/20171104/259474169_0.html

City & County of San Francisco (2017), "Cannabis Equity Report." Office of Cannabis, Human Rights Commission & Controller's Office: November 1, 2017. S.F. Ord. No. 230-17, adding art. XVI, § 1600 to 1639 to S.F. Mun. Code.

Clarke, R. C., & Merlin, M. D. (2013), "Cannabis: evolution and ethnobotany." University of California Press, 2013.

Colorado Department of Public Health and Environment (s.d), see pages "Responsible Use" responsibilitygrowshere.com/user and "Community Resources" responsibilitygrowshere.com/community-resources in "Responsibility Grows Here" website.

Colorado State University (s.d), "Hemp Insect Factsheets" hempinsects.agsci.colostate.edu/hemp-insects-text

Congreso de la República de Colombia (2016), "Ley 1787 de 2016, del 6 de julio, por medio de la cual se reglamenta el Acto Legislativo 02 de 2009." in Diario Oficial No. 49.926 de 6 de julio de 2016. www.secretariasenado.gov.co/senado/basedoc/ley_1787_2016.html

Constitutional Court of Georgia/საქართველოს საკონსტიტუციო სასამართლო **(2018),** "Judgement Of The Constitutional Court Of Georgia On The Constitutional Complaint N1282" 30th July, 2018. constcourt.ge/en/news/

judgement-of-the-constitutional-court-of-georgia-on-the-constitutional-complaint-n1282.page

Constitutional Court of South Africa (2018), "Minister Of Justice And Constitutional Development And Others vs Prince CCT 108/17" concourt.org.za/index.php/judgement/260-minister-of-justice-and-constitutional-development-and-others-v-prince-cct108-17

Constitutional Court of South Africa (2018), "Order, Case CCT 108/17" www.saflii.org.za/za/cases/ZACC/2018/30.pdf

Coogan C J (2016), "The South African hemp story: saviour crop or business as usual?" Stellenbosch University, March 2016. scholar.sun.ac.za/bitstream/handle/10019.1/98872/coogan_hemp_2016.pdf

Cortina A (1997), "Aporofobia, el rechazo al pobre: Un desafío para la democracia Estado y Sociedad." Madrid, Alianza, 1997.

Curated Caribbean (s.d.), "Marijuana Tourism in Jamaica – A Guide for Visitors" curatedcaribbean.com/marijuana-tourism-jamaica-guide-visitors

Deane C B (2018), "Prison Necropolitics." Honors Theses - All. 2045. wesscholar.wesleyan.edu/etd_hon_theses/2045

Decorte T (2016), "How to regulate Cannabis Social Clubs. Analyzing the experiences in Spain, Belgium and Uruguay" ESSD 2016, 22-24 September, Frankfurt. www.essd-research.eu/documents/ESSD%20presentations%202016/Mafalda%20Pardal.pdf

De Meijer, E.P.M et al. (1992), "Characterization of Cannabis accessions with regard to cannabinoid content in relation to other plant characteristics." Euphytica, 62, 187-200; *as cited in UNODC, 2009.*

Denver Department of Public Health & Environment (2018), "Cannabis Sustainability Working Group, Cannabis Environmental Best Management Practices Guide." City and County of Denver, 2018. denvergov.org/content/dam/denvergov/Portals/771/documents/EQ/MJ%20Sustainability/Cannabis_BestManagementPracticesGuide_FINAL.pdf

Denver Department of Public Health & Environment (2018), "Cannabis Environmental Best Management Practices, Section Carbon (Draft version, as of August 9, 2018)" denvergov.org/content/dam/denvergov/Portals/771/documents/EQ/MJ%20Sustainability/DRAFT%20Carbon%20Footprint%20Section.pdf

Dewey L H and Merrill J L (1916), "Bulletin No. 404. Hemp hurds as paper-making material." United States Department of Agriculture, Washington D.C, October 14th, 1916. Archived at: hempology.org/img/BULLETIN%20404.pdf

Díaz Velásquez M, Kreher D, Gutiérrez D, Navas N, Palencia R, Langlois R, Hernández R S, Landaverde M E, Sánchez Bustos S and Aragón V (2016), "Aportes para una nueva política de drogas en El Salvador. Miradas desde los derechos humanos." Equipo Multidisciplinario para Programa "+info -riesgo", Iglesia Evangélica Protestante de El Salvador, Abril 2016. esiglesia.org/wp-content/uploads/2016/04/Investigacion_Indesign9.pdf

Droege C (2018), "The Right to a Remedy and Reparation for Gross Human Rights Violations. A Practitioners' Guide Revised Edition, 2018." International Commission of Jurists, October 2018. icj.org/wp-content/uploads/2018/11/Universal-Right-to-a-Remedy-Publications-Reports-Practitioners-Guides-2018-ENG.pdf

Drug Policy Alliance (2015), "Fact Sheet: The Drug War, Mass Incarceration and Race." Drug Policy Alliance, New-York, June 2015. unodc.org/documents/ungass2016/Contributions/Civil/DrugPolicyAlliance/DPA_Fact_Sheet_Drug_War_Mass_Incarceration_and_Race_June2015.pdf

Dunn T J (2001), "Border Militarization Via Drug And Immigration Enforcement: Human Rights Implications" Social Justice Vol. 28, No. 2 (84), Gatekeeper's State: Immigration and Boundary Policing in An Era of Globalization, pp. 7-30 jstor.org/stable/29768073

Dutta S (2017), "Jamlu Devta Shuts Down Hotels, Guest Houses In Kullu Malana Village" The Hill Post, July 12th, 2017. hillpost.in/2017/07/malana-kullu-deity-shuts-down-village-hotels-guesthouses/109004/

Duvall C S (2016), "Drug laws, bioprospecting and the agricultural heritage of Cannabis in Africa" Space and Polity Volume 20, 2016 - Issue 1: Drugs, law, people, place and the state: ongoing regulation, resistance and change.

Eby J A (2013), "Fast and Furious, or Slow and Steady - The Flow of Guns from the United States to Mexico." in 61 UCLA L. Rev. 1082 (2013-2014) heinonline.org/HOL/LandingPage?handle=hein.journals/uclalr61&div=23&id=&page=

Embury-Dennis T (2018), "Mexico's highest court rules adults have 'fundamental right' to use cannabis, setting legal precedent" in The Independent, 1st November 2018 www.independent.co.uk/news/world/americas/cannabis-mexico-supreme-court-marijuana-weed-ban-legalisation-decriminalisation-a8612911.html

ENCOD (2011), "Code of conduct for a Cannabis Social Club in the European Union", Antwerp, Dec. 2006. encod.org/en/cannabis-social-club/how-to-create-a-cannabis-social-

club/code-of-conduct-for-european-cannabis-social-clubs

European Commission (2008), "The Former Yugoslav Republic Of Macedonia, Commission Staff Working Document, 2008 Progress Report" in "Communication From The Commission To The European Parliament And The Council Enlargement Strategy and Main Challenges 2008-2009" eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2008:2695:FIN:EN:PDF

European Commission (2019), "European Union database of registered plant varieties." ec.europa.eu/food/plant/plant_propagation_material/plant_variety_catalogues_databases/search//public/index.cfm?event=SearchVariety&ctl_type=A&species_id=240&variety_name=&listed_in=0&show_current=on&show_deleted=

European Monitoring Centre for Drugs and Drug Addiction (2012), "Insights nº12 - Cannabis production and markets in Europe." EMCDDA, Luxembourg, 2012.

European Monitoring Centre for Drugs and Drug Addiction (2018), "Cannabis legislation in Europe: an overview", Publications Office of the European Union, Luxembourg. emcdda.europa.eu/system/files/publications/4135/TD0217210ENN.pdf

European Monitoring Center on Drugs and Drug Addiction (2018), "Medical use of cannabis and cannabinoids, Questions and answers for policymaking." EMCDDA, Lisbon, 2018. emcdda.europa.eu/system/files/publications/10171/20185584_TD0618186ENN_PDF.pdf

European Monitoring Center on Drugs and Drug Addiction (2019), "Cannabis control and the right to privacy". EMCDDA, Lisbon, January 3rd, 2019. emcdda.europa.eu/news/2019/cannabis-control-and-the-right-to-privacy_en

Evans Schultes R, Hofmann A and Rätsch C (2001), "Plants of the Gods: Their Sacred, Healing, and Hallucinogenic Powers."

Fansten E (2016), "Stups ou encore, le patron de la lutte antidrogue accusé d'être au cœur du trafic" Libération, 2016. liberation.fr/france/2016/05/22/stups-ou-encore-le-patron-de-la-lutte-antidrogue-accuse-d-etre-au-coeur-du-trafic_1454417

Felbab-Brown V (2012), "Organized criminals won't fade away. How to solve the problem without generating even greater violence." Chatam House, The World Today, 1 August 2012 , Volume 68, Number 4. chathamhouse.org/publications/twt/archive/view/185139

Fisher L (2013), "Obama's Executive Privilege and Holder's Contempt." Pres Stud Q, 43: 167-185. doi:10.1111/psq.12008

Flacks S (2018), "Law, necropolitics and the stop and search of young people" Theoretical Criminology, May 31, 2018. DOI: 10.1177/1362480618774036 journals.sagepub.com/doi/abs/10.1177/1362480618774036

Foucault M (1976), "'Society must be defended.' Lectures at the Collège de France." Translated by David Macey. rebels-library.org/files/foucault_society_must_be_defended.pdf

Gangrong S, Caifeng L, Meicheng C, Yuhua M and Qingsheng C, (2010), "Cadmium Tolerance and Bioaccumulation of 18 Hemp Accessions" Appl Biochem Biotechnol (2012) 168:163–173 DOI 10.1007/s12010-011-9382-0

Gavilan J (2018), "List: Minors, college students killed in Duterte's drug war. The youngest reported victim of the war on drugs is an infant in Maguindanao." rappler.com/newsbreak/iq/179234-minors-college-students-victims-war-on-drugs-duterte

Ghehiouèche F and Riboulet-Zemouli K (2016), "Cannabis Social Club, Policy for the XXIst century: a social, ethic, human-scale and health-based model addressing the misuse, abuse and potential damages due to cannabis use while countering the unregulated growth of cannabis supply." FAAAT think & do tank, Vienna, March 2018. unodc.org/ungass2016/en/contributions/ngos/cannabis_social_club_international_proposal_group.html

Ghehiouèche F and Riboulet-Zemouli K (2018), "57 years of Global and Systematic Human Rights violations in the name of "drug control": Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law. Contribution to the report of the OHCHR for the 39th session of the Human Rights Council, pursuant to resolution HRC 37/42." FAAAT think & do tank, Geneva, May 2018. faaat.net/think-tank-en/ohchr2018

Giacomello C (2018), "Cortes de drogas en México: una crítica a partir de las experiencias de mujeres" EQUIS Justicia para las Mujeres; Instituto de Investigaciones Jurídicas, Universidad Autónoma de Chiapas, October 2018. equis.org.mx/wp-content/uploads/2018/10/Cortes_de_Drogas.pdf

Global Commission on Drug Policy (2014), Taking control: pathways to drug policies that work. Geneva, 2014. globalcommissionondrugs.org/wp-content/uploads/2016/03/GCDP_2014_taking-control_EN.pdf

Global Commission on Drug Policy (2018), Drug Policy and the Sustainable Development Agenda. Geneva,

2018. globalcommissionondrugs.org/wp-content/uploads/2018/09/ENG-2018_SDGPaper_WEB.pdf

Gounev P and Ruggiero V (2012), "Corruption and Organized Crime in Europe: Illegal partnerships" routledge.com/Corruption-and-Organized-Crime-in-Europe-Illegal-partnerships-1st-Edition/Gounev-Ruggiero/p/book/9780415693622

Greenhill, Romilly, and Ali (2013), "Paying for Progress: How Will Emerging Post-2015 Goals be financed in the New Aid Landscape?" Overseas Development Institute, 2013.

Grovel R (1996), "La préservation des forêts du Rif centro-occidental: un enjeu de développement de la montagne rifaine", Revue de géographie alpine, n° 4, p. 75-94

Guzmán Rodríguez D E (2012), "Drug Courts: Scope and Challenges of an Alternative to Incarceration." IDPC, 2012. fileserver.idpc.net/library/IDPC-Briefing-paper_Drug-courts.pdf

Hall WD, Pacula RL (2010), "Cannabis use and dependence: public health and public policy (reissue of first edition 2003)." Cambridge University Press, 2010.

Harm Reduction International (s.d.), "10 by 20 Campaign." hri.global/10by20

Harris C T, Steffensmeier D, Ulmer J T and Painter-Davis N (2009), "Are Blacks and Hispanics Disproportionately Incarcerated Relative to Their Arrests? Racial and Ethnic Disproportionality Between Arrest and Incarceration" Race Soc Probl. 2009 Dec 1; 1(4): 187–199. Published online 2009 Nov 26. doi: 10.1007/s12552-009-9019-x

Hassemer W (1999), "Persona, mundo y responsabilidad: Bases para una teoría de la imputación en derecho penal. Traducción de Francisco Muñoz Conde y María del Mar Díaz Pita." Editorial Temis, Bogotá, 1999 es.scribd.com/document/34675315/Hassemer-Winfried-Persona-Mundo-y-Responsabilidad-Bases-Para-Una-Teoria-de-La-Imputacion-en-Derecho-Penal

Hazekamp A, Tejkalová K and Papadimitriou S (2016), "Cannabis: from cultivar to chemovar II—a metabolomics approach to Cannabis classification." Cannabis and Cannabinoid Research 1(1): 202-215. liebertpub.com/doi/full/10.1089/can.2016.0017

Health Poverty Action (2015), "Briefing - Drug Policy and the Sustainable Development Goals. Why drug policy reform is essential to achieving the Sustainable Development Goals." London, November 2015. unodc.org/documents/ungass2016/Contributions/Civil/Health_Poverty_Action/HPA_SDGs_drugs_policy_briefing_WEB.pdf

Hennessy J and Pallone N J (2001), "Drug Courts in Operation: Current Research." Journal of Offender Rehabilitation, Vol. 33, Number 4, 2001. books.google.com/books?id=_Uc5RbU7cywC&pg=PA2&dq=Drug+courts+Asia&hl=es&sa=X&ved=0ahUKEwiJlu-AguLgAhXPh7QKHbIEBdUQ6AEIIzAB#v=onepage

Hibou B and Tozy M (2009), "The Fight against Corruption in Morocco: Toward a Pluralization of Modes of Government." Droit et société 2009/2 (No 72) Page 248. cairn-int.info/article-E_DRS_072_0339--the-fight-against-corruption-in.htm

Human Rights Council (2012), "Report of the Special Rapporteur in the field of cultural rights, Farida Shaheed The right to enjoy the benefits of scientific progress and its applications" in HRC report A/HRC/20/26. undocs.org/en/A/HRC/20/26

Human Rights Council (2013), "Report of the Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment, Juan E. Méndez" ohchr.org/documents/hrbodies/hrcouncil/regularsession/session22/a.hrc.22.53_english.pdf

Human Rights Council (2018), "United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas. Human Rights Council resolution 39/12 of 28 September 2018" in UNGA Draft Resolution A/C.3/73/L.30, Annex. undocs.org/en/A/C.3/73/L.30

Human Rights Watch (2017), "Licence to Kill. Philippine Police Killings in Duterte's 'War on Drugs'." hrw.org/report/2017/03/02/license-kill/philippine-police-killings-dutertes-war-drugs

Iakobishvili E (2012), "Cause for Alarm: The Incarceration of Women for Drug Offences in Europe and Central Asia, and the need for Legislative and Sentencing Reform." Harm Reduction International, 2012. hri.global/files/2012/03/11/HRI_WomenInPrisonReport.pdf

Institute of Natural Fibres and Medicinal Plants (2017), "Cannabis (Cannabis sativa L.) a valuable plant useful and medicinal", in: Postępy Fitoterapii Vol. 02/2017. INFMP, 2017.

Instituto de Regulación y Control del Cannabis (2019), "Mercado Regulado del Cannabis, Informe V. Informe al 30/11/18." IRCCA, Montevideo, November 11th, 2018. ircca.gub.uy/wp-content/uploads/2019/01/InformeMercadoReguladoCannabis-30nov2018.pdf

Institut national de la santé et de la recherche médicale (2001), "Cannabis : quels effets sur le comportement et la santé ?" INSERM, coll. « Expertise collective », 2001.

Insys Therapeutics (1985), Prescribing information on SYNDROS (dronabinol) oral solution, CX. Initial U.S. Approval: 1985. accessdata.fda.gov/drugsatfda_docs/label/2016/205525s000lbl.pdf

International Drug Policy Consortium (2012), "IDPC Drug Policy Guide, 2nd edition" fileserver.idpc.net/library/IDPC-Guide-HTML/Chapter-4.4.pdf

International Labour Office (1999), "Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour." ILO, 1999. ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C182

International Labour Office (2001), "ILO news - ILO study finds forced labour and human trafficking on the rise." ILO, 2001. ilo.org/global/about-the-ilo/newsroom/news/WCMS_007842/lang--en/index.htm

International Peace Institute (2018), "Aligning Agendas: Drugs, Sustainable Development, and the Drive for Policy Coherence. International Expert Group on Drug Policy Metrics" New York, International Peace Institute, February 2018. ipinst.org/wp-content/uploads/2018/02/1802_Aligning-Agendas.pdf

Jansseune L, Pardal M, Decorte T and Parés Franquero Ò (2019), "Revisiting the Birthplace of the Cannabis Social Club Model and the Role Played by Cannabis Social Club Federations" Journal of drug issues 49(2):338-354 · January 2019 with 16 Reads DOI: 10.1177/0022042618815690 researchgate.net/publication/329435151_Revisiting_the_Birthplace_of_the_Cannabis_Social_Club_Model_and_the_Role_Played_by_Cannabis_Social_Club_Federations

Jelsma M and Armenta A (2015), "The UN Drug Control Conventions, A primer." Transnational Institute, 2015. tni.org/files/publication-downloads/primer_unconventions_24102015.pdf

Johnson L I and Miller J D (2011), "Consequences of large-scale production of marijuana in residential buildings." Indoor Built Environment. 21: 595–600.

Kang S K , O'Leary J and Miller J (2016), "From Forbidden Fruit to the Goose That Lays Golden Eggs: Marijuana Tourism in Colorado" DOI: 10.1177/2158244016679213

Kang S K (2018), "Colorado's Marijuana Tourism Market: Where Will the Industry Go from Here?" researchgate.net/publication/322269600_Colorado's_Marijuana_Tourism_Market_Where_Will_the_Industry_Go_from_Here

Kates B and Hrick P (2018), "Pardons don't go far enough. Convictions for cannabis possession must be expunged" Posted: Oct 29, 2018 in "Opinions", CBC News. cbc.ca/news/opinion/cannabis-convictions-1.4876783

Karschner E L, Schwilke, E V, Lowe R H, David Darwin W, Pope Jr H G, Herning R, Cadet JL and Huestis M A (2009), "Do Δ^9-Tetrahydrocannabinol Concentrations Indicate Recent Use in Chronic Cannabis Users?" Addiction. 2009 December ; 104(12): 2041–2048. ncbi.nlm.nih.gov/pmc/articles/PMC2784185/pdf/nihms134593.pdf

Kaweewit Kaewjinda (2018), "Thailand lawmakers vote to legalise medical marijuana in groundbreaking move". The Independent, 2018. independent.co.uk/news/world/asia/thailand-medical-marijuana-legalised-cannabis-health-asia-drug-cabinet-a8625761.html

Keefer P and Loayza N (2010), "Innocent bystanders : developing countries and the war on drugs." Washington, DC: World Bank. documents.worldbank.org/curated/en/144831468154466729/Innocent-bystanders-developing-countries-and-the-war-on-drugs

Knight B (2014), "Heckler & Koch 'supplied guns to Iguala'." in Deutsche Welle dw.com/en/heckler-koch-supplied-guns-to-iguala/a-18126143

Komorowski J, Stepień H (2007), The role of the endocannabinoid system in the regulation of endocrine function and in the control of energy balance in humans. Postepy Hig Med Dosw (Online). 2007;61:99-105. ncbi.nlm.nih.gov/pubmed/17369778

Kovacevich N (2018), "The Next Big Thing In Cannabis: Tourism." in Forbes, 2018. forbes.com/sites/nickkovacevich/2018/08/16/the-next-big-thing-in-cannabis-tourism

Laumon B, Gadegbeku B, Martin J L, Biecheler M B (2005), "Cannabis intoxication and fatal road crashes in France : population based case-control study. BMJ. 2005 Dec 10;331(7529):1371

Lee D and Huestis M A (2013), "Current Knowledge on Cannabinoids in Oral Fluid" Drug Test Anal. 2014 Jan-Feb; 6(0): 88–111. Published online 2013 Aug 25. doi: 10.1002/dta.1514

Léonard T (2010), "Inégalités entre Français et étrangers en comparution immédiate" in "Le traitement de l'immigration, entre logique administrative et logique pénale" VOL. VII | 2010. journals.openedition.org/champpenal/7879

Levy-Pounds N (2009), "Can These Bones Live? A Look at the Impacts of the War on Drugs on Poor African-American Children and Families." Hastings Race & Poverty Law Journal, Forthcoming University of St. Thomas Legal

Studies Research Paper No. 09-30, December 6th, 2009. papers.ssrn.com/sol3/papers.cfm?abstract_id=1519089

Liechty M (2018), "Building the Road to Kathmandu: Notes on the History of Tourism in Nepal." Himalayan Studies Journal, Volume 25 Number 1 Himalaya No. 1 & 2, 2018. digitalcommons.macalester.edu/cgi/viewcontent.cgi?referer=http://scholar.google.at/&httpsredir=1&article=1287&context=himalaya

Lines R (2017), "Drug Control and Human Rights in International Law." Cambridge University Press, July 2017 doi.org/10.1017/9781316759707

Linger P, Müssig J, Fischer H and Kobert J (2001), Industrial hemp (*Cannabis sativa* L.) growing on heavy metal contaminated soil: fibre quality and phytoremediation potential

Logan B K, Mohr A L A and Talpins S K (2014), "Detection and Prevalence of Drug Use in Arrested Drivers Using the Dräger Drug Test 5000 and Affiniton DrugWipe Oral Fluid Drug Screening Devices" Journal of Analytical Toxicology, Volume 38, Issue 7, 1 September 2014, Pages 444–450. doi.org/10.1093/jat/bku050

Lu H C and Mackie K (2016), "An introduction to the endogenous cannabinoid system." Biol Psychiatry. 2016 Apr 1; 79(7): 516–525.

Lucas P (2012), "Cannabis as an adjunct to or substitute for opiates in the treatment of chronic pain." J Psychoactive Drugs. 2012 Apr-Jun;44(2):125-33. ncbi.nlm.nih.gov/pubmed/22880540

Malsbury A (2016), "What Can Appellations Do For Small Cannabis?" Canna Law Blog™, 2016. cannalawblog.com/what-can-appellations-do-for-small-cannabis/

Marco Gemperle S (2018), "Improving state legitimacy? The role of anti-corruption agencies in fragile and conflict-affected states." Global Crime 19:1, pages 22-41.

Marijuana Business Daily (2019), "California's 2018 cannabis tax haul of $345 million falls short of projections" Published online February 21st, 2019. mjbizdaily.com/california-2018-marijuana-tax-haul-345-million-short-projections/

Marijuana Policy Group (2016), "The Economic Impact of Marijuana Legalization in Colorado" mjpolicygroup.com/pubs/mpg%20impact%20of%20marijuana%20on%20colorado-final.pdf

Marks A (2019), "Defining 'personal consumption' in drug legislation and Spanish cannabis clubs." International and Comparative Law Quarterly, Volume 68, Issue 1 January 2019 , pp. 193-223. British Institute of International and Comparative Law, 2019. doi.org/10.1017/S0020589318000404

Marquet P, Delpla P A, Kerguelen S, Bremond J, Facy F, Garnier M (1998), "Prévalence de l'abus des drogues dans l'urine des conducteurs impliqués dans des accidents de la route en France: une étude collaborative." J Forensic Sci 1998; 43:806-11

Márquez Daniel C (2016), "Colau amnistiarà els clubs cannàbics ja existents a prop d'escoles." El Periodico, 2016. elperiodico.cat/ca/barcelona/20160517/colau-planteja-amnistiar-els-clubs-cannabics-5137521

Martin C (2014), "Casualties of war: How the War on Drugs is harming the world's poorest." London: Health Poverty Action, 2014. healthpovertyaction.org/wp-content/uploads/downloads/2015/02/Casualties-of-war-report-web.pdf

Martínez M (2016), "La venta en farmacias de la marihuana uruguaya se topa con los bancos." in El País, 2016. elpais.com/internacional/2017/08/30/america/1504051816_753316.html

Martínez Oró D P and Romaní Alfonso O (2016), "Els danys de les polítiques prohibicionistes en l'àmbit de les drogues" in Quaderns-e de l'Institut Català d'Antropologia, Núm. 21(1) (2016). raco.cat/index.php/QuadernseICA/article/view/317133

Maryland Medical Cannabis Commission (2015), "Maryland Medical Cannabis Act" mmcc.maryland.gov/Documents/Subtitle%2033_Sept2015_Corrected.pdf

Mbembe, Achille (2003), "Necropolitics." Public Culture, 15 (1): 11–40. DOI: 10.1215/08992363-15-1-11

McAllister S D, Soroceanu L and Desprez P Y (2015), "The Antitumor Activity of Plant-Derived Non-Psychoactive Cannabinoids." J Neuroimmune Pharmacol, 2015. 10(2): p. 255-67.

McElrath K, Taylor A and Tran K K (2016), "Black–White Disparities in Criminal Justice Referrals to Drug Treatment: Addressing Treatment Need or Expanding the Diagnostic Net?" Behav Sci (Basel). 2016 Dec; 6(4): 21. Published online 2016 Oct 2. doi: 10.3390/bs6040021

McSweeney K, Nielsen E A, Taylor M J, Wrathall D J, Pearson Z, Wang O and Plumb S T (2014), "Drug Policy as Conservation Policy: Narco-Deforestation" Science, January 31st, 2014 :489-490

McSweeney K, Richani N, Pearson Z, Devine J and Wrathall D J (2017), "Why Do Narcos Invest in Rural Land?" Journal of Latin American Geography, vol. 16

no. 2, 2017, pp. 3-29. Project MUSE, doi:10.1353/lag.2017.0019 digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=1128&context=jlag

McVey E (2017), "Portion of women executives in cannabis industry dips to 27% but still strong." Marijuana business daily, 2017. mjbizdaily.com/chart-portion-women-executives-cannabis-dips-27-still-strong/

Meisel J (2017), "Hidden in Plain Sight: Cannabis Cultivation in the Emerald Triangle" in The California Geographer 56, 2017, The California Geographical Society.

Meulemans A, Hooft P, Van Camp L, De Vrieze N, Buylaert W, Verstraete A (1996), "Étude de toxicologie et Trauma belge: une Étude portante sur la présence d'alcool, de Médicaments et de Drogues Illicites chez des Conducteurs Victimes d'accidents de la voie." Société toxicologiques de la Belgique et du Luxembourg, 1996

Migrant Rights Centre Ireland (2014), "Trafficking for Forced Labour in Cannabis Production: The Case of Ireland." mrci.ie/wp-content/uploads/2014/03/Full-Report-Trafficking-for-Forced-Labour-in-Cannabis-Production-1.pdf

Mills E (2012), "The carbon footprint of indoor cannabis production." Energy Policy. 46:48-67

Ministerio de Salud y Protección Social de Colombia (2017), "Lista de la normativa para el cannabis medicinal en Colombia" in Boletín de Prensa No 113 de 2017, August 16th, 2017. minsalud.gov.co/Paginas/Lista-la-normativa-para-el-cannabis-medicinal-en-Colombia.aspx

Ministerstwo Rodziny, Pracy i Polityki Społecznej; Departament Rynku Pracy (2014), "Stan I Struktura Rejestrowanego Bezrobocia" Na Wsi W 2014. Roku, 2014.

Mission Interministérielle de Lutte contre les Drogues et les Conduites Addictives (2015), "Projet Pilote Bobigny." Premier Ministre, MILDECA, September 3rd 2015. drogues.gouv.fr/strategie-gouvernementale/sante-justice/projet-pilote-bobigny

Moeller K E, Kissack J C, Atayee R S and Lee K C (2016), "Clinical Interpretation of Urine Drug Tests. What Clinicians Need to Know About Urine Drug Screens." Mayo Clinic Proceedings, May 2017 Volume 92, Issue 5, Pages 774–796. DOI: 10.1016/j.mayocp.2016.12.007

Molin E and Sayn B (2015), "Regards croisés sur la procédure de comparution immédiate à Lyon." in Archives de politique criminelle 2015/1 (n° 37), pages 123 à 134

Montgomery N (2002), "Cannabis Resin Impurities Survey Project. Identification of health risks associated with the consumption of adulterated cannabis resin." Department of Social Anthropology, University of Edinburgh, 2002.

Movig KL, Mathijssen MP, Nagel PH, van Egmond T, de Gier JJ, Leufkens HG (2004), "Usage de substances psychoactives et risque d'accident de véhicules automobiles." Accident Anal Précédent 2004; 36 . :631-6

Musto C and Robaina G (2018), "Evolución del consumo de cannabis en Uruguay y mercados regulados." Monitor Cannabis Uruguay, 2018. monitorcannabis.uy/evolucion-del-consumo-de-cannabis-en-uruguay-y-mercados-regulados

Nafstad K (2019), "Negative consequences of control in the enforcement of current Norwegian law regarding cannabis." Normal Norge, February 2019.

National Academies of Sciences Engineering Medicine (2017), "The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research." National Academies Press, 2017.

New Frontier Data (2018), "New Frontier Data Projects U.S. Legal Cannabis Market to Grow to $25 Billion by 2025." newfrontierdata.com/marijuana-insights/new-frontier-data-projects-u-s-legal-cannabis-market-grow-25-billion-2025/

New Indian Express (2018), Cannabis seeds can help government fight malnutrition in children. The New Indian Express, 2018. www.newindianexpress.com/cities/vijayawada/2018/aug/19/cannabis-seeds-can-help-government-fight-malnutrition-in-children-1859696.html

O'Brien C and Arathi H S (2019), "Bee diversity and abundance on flowers of industrial hemp (Cannabis sativa L.)." Biomass and Bioenergy Volume 122, March 2019, Pages 331-335. doi.org/10.1016/j.biombioe.2019.01.015

Office Marocain de la Propriété Industrielle et Commerciale (s.d), "Indications Géographiques et Appellations d'Origine." ompic.org.ma/fr/content/indications-geographiques-et-appellations-dorigine

Hanuš L O, Meyer SM, Muñoz E, Taglialatela-Scafatid O and Appendino G (2016), "Phytocannabinoids: a unified critical inventory." www.dropbox.com/s/mnk80rdn9fbgv2t/Phytocannabinoids%20NPR_HANUS.pdf?dl=0

Ochoa D and Chulver P (2019), "Stories of Birds and Cages." Bolivia, Legal Notice: 4-1-1492-17

Oregon Liquor Control Commission (2014), "Measure 91 - Control, Regulation, and Taxation of Marijuana and Industrial Hemp Act" oregon.gov/olcc/marijuana/documents/measure91.pdf

Oregon Retailers of Cannabis Association (2019), "Support Automatic Expungement of Past Cannabis Convictions!".oregoncannabisretailers.com/blog/7160699

Organization of American States (2013), "The Drug Problem in the Americas: Studies. Drugs and development." Washington, 2013. cicad.oas.org/drogas/elinforme/informeDrogas2013/drugsDevelopment_ENG.pdf

Pardal M, Decorte T, Bone M and Parés Franquero Ò (2018), "Cannabis Social Clubs' presence, ties and practices within the European Union" cannabmed.com/index.php/general/nuevo-estudio-sobre-la-evolucion-del-modelo-de-club-social-de-cannabis/

Pauné M L and Ferro L (2014), "El 'boom' de clubs de cannabis atrae el turismo del porro a Barcelona", in La Vanguardia, 2014. lavanguardia.com/vida/20140119/54399239955/boom-clubs-cannabis-turismo-porro-barcelona.html

Perelmuter T (2011), "Commons vs. Merchandise: seeds disputes. An analysis of the role of intellectual property in fencing processes." cdsa.aacademica.org/000-034/667.pdf

Pérez Ricart C A (2013), "German arms in Mexico: the case of the export to Mexico of Heckler & Koch G36 rifles" Volume MVB-AG-2013-001, 2013. nbn-resolving.org/urn:nbn:de:0168-ssoar-363281

Pervaiz M and Sain M M (2003), "Carbon storage potential in natural fiber composites." in Resources, Conservation and Recycling Volume 39, Issue 4, November 2003, Pages 325-340 sciencedirect.com/science/article/pii/S0921344902001738

Peyraube R (2015), "Acercamiento a los ejes conceptuales básicos sobre el uso Problemático de Drogas", in Kreher D et al. (2015), "Hacia un nuevo enfoque para la regulación de las drogas en El Salvador. Una exploración de los grupos de presión, formadores de opinión y tomadores de decisión." fileserver.idpc.net/library/Hacia-un-nuevo-enfoque-para-la-regulación-de-las-drogas-en-El-Salvador-IEPES.pdf

Pfeiffer S (2013), "Rights of Indigenous Peoples and the International Drug Control Regime: The Case of Traditional Coca Leaf Chewing" Goettingen Journal of International Law 5 (2013) 1, 287-324 www.gojil.eu/issues/51/51_article_pfeiffer.pdf

Piot A et al. (2017), "Study of a hempcrete wall exposed to outdoor climate: Effects of the coating." Construction and Building Materials Volume 139, 15 May 2017, Pages 540-550 doi.org/10.1016/j.conbuildmat.2016.12.143

Ponce M (2018), "Environmental Impacts of Cannabis Cultivation in California." csus.edu/envs/for%20students/Ponce.finalthesis.spring18-.pdf

Powell D, Pacula R L and Jacobson M (2018), "Do medical marijuana laws reduce addictions and deaths related to pain killers?" Journal of Health Economics, 58, 29-42. DOI: 10.1016/j.jhealeco.2017.12.007

Prud'homme M, Cata R, Jutras-Aswad D (2015), "Cannabidiol as an intervention for addictive behaviors: A Systematic review of the evidence." Subst Abuse. 9:33-8. doi: 10.4137/SART.S25081

Purcell C, Davis A, Moolman N and Taylor S M (2019), "Reduction of Benzodiazepine Use in Patients Prescribed Medical Cannabis" Cannabis and Cannabinoid Research, Ahead of Print. Published Online: 24 Jan 2019 doi.org/10.1089/can.2018.0020

Rahman F and Nick Crofts N (2013), "Drug Law Reform in East and Southeast Asia." Lexington Books, Plymouth, 2013. https://books.google.dk/books?id=qTt7AAAAQBAJ&printsec=frontcover

Raikhel E (2011), "William Garriott on narcopolitics" October 17, 2011. somatosphere.net/2011/10/william-garriott-on-narcopolitics.html

Ramaekers J, Berghaus G, van Laar M, and Drummer O H (2002), "Diminution de la performance et le risque d'une collision survenue après la consommation de cannabis. Actes de la Conférence scientifique internationale sur le cannabis." Fondation Rodin, Ministère de la Santé Publique de Belgique, 2002:69-87

Rankin J and Contenta S (2017), "Toronto marijuana arrests reveal 'startling' racial divide." The Star, July 6, 2017. thestar.com/news/insight/2017/07/06/toronto-marijuana-arrests-reveal-startling-racial-divide.html

Rehman M S U, Rashid N, Saif A, Mahmood T and Han J I (2013), "Potential of bioenergy production from industrial hemp (Cannabis sativa): Pakistan perspective." doi.org/10.1016/j.rser.2012.10.019

Resa Nestares C (2001), "La macroeconomía de las drogas." Universidad Autónoma de Madrid, Madrid, 2001.

Riboulet-Zemouli K, Krawitz M and Ghehiouèche F (2018), "The Crimson Digest, volume 1. Updated source of understanding of the international scheduling of Cannabis and its ongoing changes." FAAAT think & do tank, Paris, November 2018. faaat.net/publications/9791097087067

Riboulet-Zemouli K (2019), "The Crimson Digest, volume 2. Analysis of the 40th and 41st ECDD reviews outcomes" FAAAT think & do tank, Paris, March 2019. Available at: faaat.net/publications/9791097087074

Rolles S (2016), "Turkey's opium trade: successfully transitioning from illicit production to a legally regulated market." TDPF, 2016. tdpf.org.uk/sites/default/files/Turkey-briefing.pdf

Rolles S, Murkin G, Powell M, Kushlick D, Saunter N and Slater J (2016), "The Alternative World Drug Report, 2nd edition." TDPF, 2016. transformdrugs.org/wp-content/uploads/2018/10/AWDR-2nd-edition.pdf

Romani Gerner M (2017), "Informe analítico: Modelos de Regulación de Cannabis en las Américas" in "Aportes a la Reflexión Sobre Temas Relacionados con Drogas." Organization of American States, Washington, June 2017. academia.edu/35428791/APORTES_A_LA_REFLEXI%C3%93N_SOBRE_TEMAS_RELACIONADOS_CON_DROGAS

Saintout F J (2014), "Youth and injury in Argentina." Andamios vol.11 no.24 México ene./abr. 2014. www.scielo.org.mx/scielo.php?pid=S1870-00632014000100016&script=sci_arttext

Samson M T, Small-Howard A, Shimoda L M N, Koblan-Huberson M, Stokes A J and Turner H (2003), "Differential Roles of CB1 and CB2 Cannabinoid Receptors in Mast Cells." J Immunol May 15, 2003, 170 (10) 4953-4962; DOI: 10.4049/jimmunol.170.10.4953

Samyn N and Van Haeren C (2000), "Onsite testing of saliva and sweat with DrugWipe and determination of concentrations of drugs of abuse in saliva, plasma and urine of suspected users." International Journal of Legal Medicine 113(3):150-4 · May 2000

Sandoval C (2004), "New sciences. Cyborg Feminism and the Methodology of the Oppressed" in: AA.VV. Other Inappropriate. Feminisms from the frontiers. Mapas Collection, Traficantes de Sueños, Madrid. 2004.

Schluttenhofer C and Yuan L (2017), "Challenges towards Revitalizing Hemp: A Multifaceted Crop" Trends in Plant Science, November 2017, Vol. 22, No. 11. DOI: 10.1016/j.tplants.2017.08.004 cell.com/trends/plant-science/pdf/S1360-1385(17)30177-2.pdf

Sevigny E L (2018), "The effects of medical marijuana laws on cannabis-involved driving", Accident Analysis & Prevention, 2018. DOI: 10.1016/j.aap.2018.05.023

Shahzad A (2012), "Hemp fiber and its composites - A review." Journal of Composite Materials - J Compos Mater. 46. 973-986. DOI: 10.1177/0021998311413623.

Shelley L (2012), "The Relationship of Drug and Human Trafficking: A Global Perspective" European Journal on Criminal Policy and Research, September 2012, Volume 18, Issue 3, pp 241–253 link.springer.com/article/10.1007/s10610-012-9175-1

Sherman B J et al. (2016), "Gender differences in cannabis use disorder treatment: Change readiness and taking steps predict worse cannabis outcomes for women." Addictive behaviours, 2016. doi.org/10.1016/j.addbeh.2016.04.014

Shirk D A (2011), "The Drug War in Mexico. Confronting a Shared Threat" Council on Foreign Relations, Special Report No. 60 March 2011. cfrd8-files.cfr.org/sites/default/files/pdf/2011/03/Mexico_CSR60.pdf

Sifaneck S J, and Kaplan C D (1995), "Keeping off, stepping on and stepping off: the steppingstone theory reevaluated in the context of the Dutch cannabis experience." Contemporary drug problems, 1995. doi.org/10.1177/009145099502200306

Smith-Heisters S (2008), "Illegally Green: Environmental Costs of Hemp Prohibition." Reason Foundation, March 2008. Policy study 367.

State of California (2018), "Assembly Bill No. 1793 - Cannabis convictions: resentencing. An act to add Section 11361.9 to the Health and Safety Code, relating to cannabis." leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1793

Stoa R B (2017), "Marijuana Appellations: The Case for Cannabicultural Designations of Origin." Harvard Law & Policy Review, Vol. 11. harvardlpr.com/wp-content/uploads/2017/07/Stoa.pdf

Strobel K (2014), "Arms, Exports, Influence: Institutional Corruption in the German Arms Export Regime." Edmond J. Safra Working Papers, No. 47. (August 7, 2014). ssrn.com/abstract=2476633

Suba Chandran D (1998), "Drug trafficking and the security of the state: A case study of Pakistan", Strategic Analysis, 22:6, 903-922, DOI: 10.1080/09700169808458862

Suprema Corte de Justicia de la Nación (2018), "Noticia No. 140/2018 - Reitera Primera Sala Inconstitucionalidad de la Prohibición Absoluta del Consumo Recreativo De Marihuana e Integra Jurisprudencia" www.internet2.scjn.

gob.mx/red2/comunicados/noticia.asp?id=5785

Swiss Confederation (2018), "Products containing cannabidiol (CBD): Overview and implementation guide. Status as of 30.11.2018 (second updated version)." Swiss Agency for Therapeutic Products, Federal Office of Public Health, Federal Food Safety and Veterinary Office, Federal Office for Agriculture, November 30th, 2018. www.swissmedic.ch/dam/swissmedic/en/dokumente/marktueberwachung/abrenzungsfragen/produkte_mit_cannabidiolcbdueberblickundvollzugshilfe.pdf.download.pdf/products_containingcannabidiolcbdoverviewandimplementationguide.pdf

Tanguay G A, Rajaonson J, and Therrien M-C (2013), "Sustainable tourism indicators: selection criteria for policy implementation and scientific recognition", Journal of Sustainable Tourism, 21:6, 862-879, DOI: 10.1080/09669582.2012.742531

Tarun Jami (2018), How Hemp can Help India Achieve its Sustainable Development Goals. Entrepreneur India, 2018. entrepreneur.com/article/316893

Technion Israel Institute of Technology (s.d), "homepage, Laboratory of Cancer Biology and Cannabinoid Research." dmeiri.net.technion.ac.il

Tharoor A. (2018), US Corp Cashes in as Lesotho Becomes the First African Country to Legalise Cannabis Cultivation. Talking Drugs, 2018. www.talkingdrugs.org/lesotho-cannabis-legalisationrestricted

The Economist, T.W. (2013), "Why is less cocaine coming from Colombia?" The Economist, 2013.

The Guardian (2011), "Mexico drugs war murders data mapped" theguardian.com/news/datablog/2011/jan/14/mexico-drug-war-murders-map

Thomas R E (1998), "Benzodiazepine use and motor vehicle accidents. Systematic review of reported association." Can Fam Physician 1998 Apr; 44:799–808

Toussaint E (2014), "HSBC : une banque au lourd passé et au présent sulfureux" in Médiapart, 2014. blogs.mediapart.fr/cadtm/blog/190614/hsbc-une-banque-au-lourd-passe-et-au-present-sulfureux

Transform Drug Policy Foundation (2015), "The War on Drugs: Undermining Human Rights" www.countthecosts.org/sites/default/files/Human_rights_briefing.pdf

Tupper K W and Labate B C (2012), "Plants, Psychoactive Substances and the International Narcotics Control Board: The Control of Nature and the Nature of Control." Human Rights and Drugs, Volume 2, No. 1, 2012 neip.info/novo/wp-content/uploads/2015/09/HRDP_Journal_Tupper_Labate.pdf

Turbiville Jr G H (2011), "Silver over the border: US law enforcement corruption on the Southwest Border". Small Wars & Insurgencies, 22:5, 835-859, DOI: 10.1080/09592318.2011.620811

United Nations (2018), "Joint United Nations statement on Ending Discriminations in Health Care Settings". UNAIDS, UNHCR, UNICEF, World Food Programme, UNDP, UNFPA, UN Women, ILO, UNESCO, WHO, UN Human Rights, IOM. who.int/gender-equity-rights/knowledge/ending-discrimination-healthcare-settings.pdf

United Nations Development Programme (2015), Addressing the development dimensions of drug policy. 2015. www.undp.org/content/dam/undp/library/HIV-AIDS/Discussion-Paper--Addressing-the-Development-Dimensions-of-Drug-Policy.pdf

United Nations Educational, Scientific and Cultural Organization (s.d.), "Teaching and learning for a sustainable future: a multimedia teacher education programme. Sustainable Tourism." unesco.org/education/tlsf/mods/theme_c/mod16.html

United Nations Food and Agricultural Organization (s.d), FAOSTAT, Producer Prices - Monthly. FAO, 2018. See: fao.org/faostat/en/#data/PM

United Nations General Assembly (1948), "A/RES/217(III) - Universal Declaration of Human Rights" undocs.org/en/A/RES/217(III)

United Nations General Assembly (1966), "Resolution 2200A (XXI) - International Covenant on Economic, Social and Cultural Rights" ohchr.org/en/professionalinterest/pages/cescr.aspx

United Nations General Assembly (1969), "Resolution 2542 (XXIV) - Declaration on Social Progress and Development" un-documents.net/a24r2542.htm

United Nations General Assembly (1998), "Resolution A/RES/S-20/2. Political Declaration Adopted by the United

Nations General Assembly at its Twentieth Special Session" undocs.org/en/A/RES/S-20/2

United Nations General Assembly (2014), "Resolution A/69/700 - The road to dignity by 2030: ending poverty, transforming all lives and protecting the planet Synthesis report of the Secretary-General on the post-2015 agenda." un.org/en/development/desa/publications/files/2015/01/SynthesisReportENG.pdf

United Nations General Assembly (2015), "Resolution A/RES/70/1 - Transforming our world: the 2030 Agenda for Sustainable Development." undocs.org/en/A/RES/70/1

United Nations General Assembly (2016), "Resolution A/RES/S30/1 - Our joint commitment to effectively addressing and countering the world drug problem. Outcome Document of the 2016 United Nations General Assembly Special Session on the World Drug Problem. New York, 19-21 April 2016" United Nations, New-York, 2016. unodc.org/documents/postungass2016//outcome/V1603301-E.pdf

United Nations High Commissioner on Human Rights (2015), "Using the death penalty to fight drug crimes violates international law, UN rights experts warn World Day Against the Death Penalty" ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=16581&LangID=E;

United Nations High Commissioner on Human Rights (2016), "Joint Open Letter by the UN Working Group on Arbitrary Detention; the Special Rapporteurs on extrajudicial, summary or arbitrary executions; torture and other cruel, inhuman or degrading treatment or punishment; the right of everyone to the highest attainable standard of mental and physical health; and the Committee on the Rights of the Child, on the occasion of the United Nation General Assembly Special Session on Drugs New York, 19-21 April 2016" ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=19828&LangID=E

United Nations High Commissioner on Human Rights (2018), "High Commissioner's global update of human rights concerns. 37th session of the Human Rights Council" OHCHR, Geneva, March 7th, 2018. ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=22772

United Nations Office on Drugs and Crime (1953), "Bulletin on Narcotic Drugs, The Surprising Extinction of the Charas Traffic." United Nations, New-York, 1953.

United Nations Office on Drugs and Crime (2003), "Enquête sur le cannabis au Maroc 2003. Rapport de l'Office des Nations Unies contre la Drogue et le Crime et l'Agence pour la Promotion et le Développement Economique et Social des Préfectures et Provinces du Nord du Royaume", Décembre 2003. unodc.org/pdf/publications/morocco_cannabis_survey_2003_fr.pdf

United Nations Office on Drugs and Crime (2008), "Making drug control fit for purpose: Building on the UNGASS decade. Report by the Executive Director of the United Nations Office on Drugs and Crime as a contribution to the review of the twentieth special session of the General Assembly." UNODC, 2008

United Nations Office on Drugs and Crime (2009), "Recommended Methods for the Identification and Analysis of Cannabis and Cannabis Products." UNODC, 2009. unodc.org/documents/scientific/ST-NAR-40-Ebook_1.pdf

United Nations Office on Drugs and Crime (2011), "Estimating illicit financial flows resulting from drug trafficking and other transnational organized crimes." unodc.org/documents/data-and-analysis/Studies/Illicit-financial-flows_31Aug11.pdf

United Nations Office on Drugs and Crime (2013), "The International Drug Control Conventions. Single Convention on Narcotic Drugs of 1961, as amended by the 1972 Protocol; Convention on Psychotropic Substances of 1971; Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988; with final acts and resolutions." United Nations, New-York, November 2013. unodc.org/documents/commissions/CND/Int_Drug_Control_Conventions/Ebook/The_International_Drug_Control_Conventions_E.pdf

United Nations Office on Drugs and Crime (2018), "World Drug Report 2018. Booklet 2" UNODC, 2018. unodc.org/wdr2018/prelaunch/WDR18_Booklet_2_GLOBAL.pdf

United Nations Office on Drugs and Crime (2018), "World Drug Report 2018. Booklet 5" UNODC, 2018. unodc.org/wdr2018/prelaunch/WDR18_Booklet_5_WOMEN.pdf

United Nations Office on Drugs and Crime (s.d.), "UNGASS 2016 Good Practices Portal: Implementing UNGASS recommendations." Commission on Narcotic Drugs, s.d. See: www.postungass2016.org

United Nations Secretary-General (2018), "Secretary-General's remarks on Climate Change [as delivered]."

un.org/sg/en/content/sg/statement/2018-09-10/secretary-generals-remarks-climate-change-delivered

UN Women (2014), "A Gender Perspective On The Impact of Drug Use, the Drug Trade, and Drug Control Regimes", UN Women, New York, 2014.

Vagle J L (2016), "Tightening the OODA Loop: Police Militarization, Race, and Algorithmic Surveillance." 22 Mich. J. Race & L. 101 (2016). repository.law.umich.edu/mjrl/vol22/iss1/4

Van Den Berg A E (2005), "Health Impacts of Healing Environments: A Review of Evidence for Benefits of Nature, Daylight, Fresh Air, and Quiet in Healthcare Settings." Foundation 200y.o University Hospital Groningen, Van Eck & Oosterink, Dodewaard; 2005.

Van Kempen & Fedorova (2016), "International law and cannabis II. Regulation of cannabis cultivation and trade for recreational use: positive human rights obligations versus UN Narcotic Drugs Conventions." Radboud University, 2016.

Verstraete A G (2004), "Detection Times of Drugs of Abuse in Blood, Urine, and Oral Fluid" Basel Proceedings, Ther Drug Monit 2004;26:200–205. pdfs.semanticscholar.org/157f/ce13e153e873b50b8644e34be07610800ffc.pdf

Veverka J (2010), "Malana: Globalization of a Himalayan Village", documentary movie from 2010. See: imdb.com/title/tt1522152/

Villarreal R (2012), "Rasquera aprueba el cultivo de cannabis en el municipio con el 56% de apoyo." in El Mundo, 2012. elmundo.es/elmundo/2012/04/10/barcelona/1334058617.html

Villaveces Izquierdo S (2008), "Memory, Representations And Narratives: Rethinking Violence In Colombia" in "¿Por qué erradicamos? Entre bastiones de poder, cultura, y narcotráfico." First published: 28 June 2008 doi.org/10.1525/jlca.2002.7.1.226

Waller P F, Blow F C, Maio R F, Singer K, Hill E M, Schaefer N (1997), "Crash characteristics and injuries of victims impaired by alcohol versus illicit drugs." Accid Anal Prev. 1997 Nov; 29(6):817–27

Wang H, Xu Z, Kohandehghan A, Li Z, Cui K, Tan X, Stephenson T J, King'ondu C K, Holt C M B, Olsen B C, Kwon Tak J, Harfield D, Anyia A O and Mitlin D (2013), "Interconnected Carbon Nanosheets Derived from Hemp for Ultrafast Supercapacitors with High Energy." ACS Nano 2013 7 (6), 5131-5141 DOI: 10.1021/nn400731g

Wacquant L (2009), "Punishing the poor: the neoliberal government of social insecurity." Duke University Press, Durham and London, 2009. libcom.org/files/Loïc%20Wacquant%20-%20Punishing%20the%20Poor.pdf

Washington Office on Latin America & Transnational Institute (2011), "Systems Overload - Drug laws and prisons in Latin America." Amsterdam/Washington, March 2011. wola.org/sites/default/files/downloadable/Drug%20Policy/2011/TNIWOLA-Systems_Overload-def.pdf

Washington Office on Latin America (2016), "Women, Drug Policies, and Incarceration: A Guide for Policy Reform in Latin America and the Caribbean" oas.org/es/cim/docs/womendrugsincarceration-en.pdf

Washington State Senate Committee Services (2018), "A Legislator's Guide to Washington's Marijuana Laws" leg.wa.gov/Senate/Committees/lbrc/Documents/Reports%20and%20Publications/Marijuana%20Guide%202018%20final%205-30-18.pdf

Weatherburn D, Fitzgerald J and Hua J (2003), "Reducing Aboriginal Over-representation in Prison" First published: 18 November 2003. doi.org/10.1046/j.1467-8500.2003.00338.x

Wen H and Hockenberry J M (2018), "Association of Medical and Adult-Use Marijuana Laws With Opioid Prescribing for Medicaid Enrollees." JAMA Intern Med. 2018 May 1;178(5):673-679. DOI: 10.1001/jamainternmed.2018.1007.

Werb D, Rowell G, Guyatt G, Kerr T, Montaner J and Wood E (2011), "Effect of Drug Law Enforcement on Drug Market Violence: A Systematic Review. The International journal on drug policy. 22. 87-94. DOI: 10.1016/j.drugpo.2011.02.002.

Werb D, Maghsoudi N et al. (2015), "Using Evidence to Talk about Cannabis", International Centre for Science in Drug Policy, Toronto, August 2015. d3n8a8pro7vhmx.cloudfront.net/michaela/pages/61/attachments/original/1440691041/Using_Evidence_to_Talk_About_Cannabis.pdf?14406910412001

Wodak A, Reinarman C and Cohen P D A (2002), "Cannabis control: costs outweigh the benefits." BMJ 2002;324:105 doi: doi.org/10.1136/bmj.324.7329.105

Wolf S (2018), "Drugs, Violence, and Corruption:

Perspectives from Mexico and Central America." Published online: 02 January 2018 doi.org/10.1111/j.1548-2456.2016.00298.x

Wood, D B (2003), "Wild West: Drug cartels thrive in US national parks", The Christian Science Monitor, 10.06.03. csmonitor.com/2003/0610/p01s03-usgn.html

World Health Organization (1954), "Expert Committee on on Drugs Liable to produce Addiction, Fifth Report." WHO, Technical Report Series, No 95. apps.who.int/iris/bitstream/handle/10665/40262/WHO_TRS_95.pdf

World Health Organization (2007), "Unequal, Unfair, Ineffective and Inefficient. Gender Inequity in Health: Why it exists and how we can change it." WHO Commission on Social Determinants of Health, Women and Gender Equity Knowledge Network, 2007.

World Health Organization (2018), "Q&A: WHO Expert Committee on Drug Dependence (ECDD) – 12-16 November." WHO Essential medicines and health products, 2018. who.int/medicines/access/controlled-substances/ecdd/q-a-ecdd-2018/en

World Intellectual Property Organization (s.d), "Lisbon Agreement for the Protection of Appellations of Origin and their International Registration of October 31, 1958, as revised at Stockholm on July 14, 1967, and as amended on September 28, 1979" wipo.int/export/sites/www/lisbon/en/legal_texts/lisbon_agreement.pdf

Wright M W (2011), "Necropolitics, narcopolitics, and femicide: gendered violence on the Mexico-U.S. border." Signs (Chic). 2011;36(3):707-31. ncbi.nlm.nih.gov/pubmed/21919274

Ying X (2012), "On the Death Penalty for Drug-Related Crime in China." Human Rights and Drugs, Volume 2, No. 1, 2012, January 1st, 2012.

Zobel F, Notari L, Schneider E and Rudman O (2019), "Cannabidiol (CBD): analyse de situation (Vol. No. 97). Lausanne, Switzerland: Addiction Suisse, 2019.

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